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GENERAL OVERPRODUCTION

A Study of Say's Law of Markets

I. THE MONETARY BASIS OF SAY'S LAW OF MARKETS

A. THE TWO CLASSICAL PRINCIPLES

UNTIL recently, J. B. Say's Law of Markets has been widely accepted by economic theorists,[1] even though Say's contention of the impossibility of general overproduction and glutting of markets[2] seemed contradicted by the recurring experiences of severe crises. The presence of general overproduction, however, so impressed Say that he felt compelled to introduce modifications of his theory, which destroyed its inner consistency.[3] This he did by defining "production," not in the usual sense of physical output of goods and services but only as the production of goods of which the sales receipts cover the costs. Thus Say reduced his Law of Markets to a meaningless tautology.[4]

[1] See, for example, Spiethoff's article on "Crises" in the *Handwörterbuch der Staatswissenschaften*, VI, 78.

[2] As stated in his *Traité d'économie politique* (Brussels, 1827), I, 171: "Certain produits surabondent, parce que d'autres sont venus à manquer."

[3] Cf. the description of the development of Say's Law of Markets in Bergmann's *Geschichte der nationalökonomischen Krisentheorien* (Stuttgart, 1895), pp. 67 ff. Also Miksch, *Gibt es eine allgemeine Überproduktion?* (Jena, 1929), pp. 11 ff.

[4] Cf. Say, *Cours complet d'économie politique pratique* (3d ed.; Brussels, 1837), Trois. partie, Div. 1, chap. iii: "Au fait, on ne produit véritablement que lorsque tous les services productifs étant payés, le produit vaut ses frais de production."

These modifications must be omitted from the account of the evolution of the theory if it is to be utilized as a theory of business cycles: we call it "overproduction" if goods cannot be sold at cost. It is hoped that this inquiry will show that this is possible; that the Law of Markets can, with careful treatment, even today be a satisfactory point of departure for the study of the fundamental problems of business cycles. With this purpose in mind, it is useful to re-examine the famous statement of Say's Law—"Products are given in exchange for products"—by emphasizing its monetary implications, thus following the line of thought suggested by Say himself.

We shall attempt to demonstrate the nucleus of Say's theory in both a stationary and a growing economy. Let us begin with a simple illustration: a stationary economy, in which the volume of production as a whole does not change. One commodity suddenly finds itself deprived of a market; there is partial overproduction because of a change in the tastes of consumers. In this case consumers will spend a smaller share of their incomes for this commodity and a larger share will remain for other products. As Say has thus formulated it (cf. footnote 2), partial overproduction in one industry implies underproduction in others, with corresponding increases in prices and profits for the latter industries.[5] The premise of this argument (which may also be called the first principle of classical theory) is that purchasing power, expressed as a nominal quantity of money, cannot be lost in circulation.

The second fundamental principle of classical theory is arrived at by dropping the assumption that the volume of production is constant. If we assume a considerable increase in production in a single branch of activity, still maintaining production in other industries at their usual levels, it is possible that the expanding industry will absorb a greater share of purchasing power from other industries, without, however, covering its costs, since the

[5] We disregard here certain complications which arise out of the differences in the amount of real capital per head used in the various industries. These differences may, however, very markedly bear on the volume of employment in the economic system. For a treatment of this problem see my article "Öffentliche Kapitalanlagen in ihrer Wirkung auf den Beschäftigungsgrad" in *Economic Essays in Honor of Gustav Cassel* (London, 1933).

increase in cost of production might be greater than the increased returns. In this case we would encounter difficulties in selling the additional product. There might be a deficit in the expanded industry as well as in the other stationary ones, which, as a result of the smaller share of purchasing power remaining to them, are unable to get their customary returns. But it is obvious that, although we have here general overproduction, it is an overproduction due to monetary causes. The quantity of money has not grown in proportion to the quantity of commodities. Unlike the first case, the general price level must be lowered. A second principle of the traditional classical theory (which, even today, has adherents) is as follows: The absolute position of the general price level is a matter of indifference; only price *relations* or *exchange values* are of importance.[6] As soon as the price level has adjusted itself to the new volume of production, it follows logically that the apparent general overproduction will again become only partial, according to the Law of Markets.

Say himself, in order to overcome the difficulties suggested in our second illustration, adopted a procedure other than the one indicated by the second principle. This, too, is worthy of study. According to Say, there are no obstacles to making the quantity of money proportionate to the quantity of goods. Indeed, this increase takes place, according to Say (anticipating the ideas of the so-called "banking school"), automatically.[7] It is obvious that the practicability of this theoretical solution for any particular economy depends on its system of currency and credit. Even if we suppose that such a proportional increase of purchasing power would encounter no political difficulties, it is still questionable whether it would not find obstacles inherent in the structure of a

[6] This is, for instance, the thesis of the polemic against Foster and Catchings by Souter, which won the Pollak Foundation Award.

[7] *Traité*, p. 167: "La marchandise intermédiaire, qui facilite tous les échanges (la monnaie), se remplace aisément dans ce cas-là par des moyens connus des négociants, et bientôt la monnaie afflue, par la raison que la monnaie est une marchandise, et que toute espèce de marchandise se rend aux lieux où l'on en a besoin." These "moyens" are interpreted by Say as follows: "Des effets au porteur, des billets de banque, des crédits ouverts, des compensations de créances, comme à Amsterdam et à Londres."

capitalistic economy, dependent as it is on banking credit. Even the first principle of the classical theory, the principle of the indestructibility of nominal purchasing power, cannot claim unconditional validity; for it is clear that purchasing power, in this connection, can only refer to that portion of it which is effectively circulating. The hoarding process, in particular, is to be considered as a cause of a reduction in the amount of purchasing power. The analysis of the theory of underconsumption will take us further into a consideration of this problem.

B. INDIFFERENCE OF THE PRICE LEVEL?

The discussion of the second principle maintaining the irrelevance of the absolute position of the price level can be brief, despite the many existing controversies, since there are a number of recent inquiries which clarify this problem.[8]

Opponents of the modern concept of stabilizing the price level have argued that all increases in production, in so far as they are due to technical progress, would allow a harmless and frictionless lowering of prices, since a proportional reduction in unit cost would have been achieved.[9] According to these opponents, the principle of a constant quantity of money must be strictly adhered to, in order to avoid credit inflation, boom, and consequent collapse. Only in some exceptional cases, and within narrow limits, would it be permissible to deviate from this principle, when, for example, a change in the velocity of circulation of money or a growing differentiation[10] in the production process diminishes the current money-stream and produces a need for additional money.

For our purposes, it is only essential that the classicists, by allowing in some cases for an increase in the volume of money, surrender their position of the irrelevance of the general price level; for, if it were irrelevant, not even such changes of the current

[8] See my remarks in "Kreislauf des Geldes" (*Weltwirtschaftliches Archiv*, Vol. XXXIII [April, 1931]), Part IV. Especially note Haberler's *Die Kaufkraft des Geldes und die Stabilisierung der Wirtschaft im Deutschen Reich* (1931), pp. 993 ff.; W. Egle *Neutrales Geld* (Jena: Gustav Fischer, 1933).

[9] Hayek is the principal exponent of this thought, in *Production and Prices* (London, 1931).

[10] This means an increase in the number of juridically independent firms, without any change in technique or amount of factors of production.

money-stream would make necessary an increase in the quantity of money. Apparently, this concession of the classicists assumes the general thesis of the adherents of stabilization[11] that, regardless of the conditions under which commodity prices may fall, a general lowering of the prices of the factors of production can occur only as a serious and probably long-drawn-out depression phenomenon. Wages are difficult to change;[12] interest rates contractually determined can be changed not at all or only under the imminent threat of bankruptcy. If one accepts this thesis, dictated, as it is, by the impressive force of economic realities, then the idea that all increases in the quantities of goods resulting from so-called "changes in productivity" would exercise a harmless price-lowering influence is a *non-sequitur*. "Increased productivity" is an indefinite concept. We can reasonably speak only of the productivity (or "efficiency") of a single factor of production, which is measured by the ratio of output to the input of the specific factor. In increasing production, the "productivity" of one factor—the amount of which remains constant—can rise, while that of the other, which is increased, can decline; thus we find that with the successive application of doses of fertilizer upon a given parcel of soil, the productivity of the capital (here represented by the fertilizer) becomes less, while that of the soil increases. We can only speak of an average change in productivity of all the factors when their quantitative relation remains the same.

Consequently, we find that the writers referred to in footnote 8 distinguish between genuine "technical progress" and "intensive growth," although both are technical changes.[13] Intensive growth occurs when one single factor is increased while the other factors remain unchanged, as, for example, when the amount of capital per worker is increased. These technical changes were dormant within the technical reach of management but were not hitherto applied, for lack of one factor of production or because of the high

[11] This is expressly stated by Hayek, *op. cit.*, p. 91.

[12] For the sake of simplicity, we suppose here effort-wages. Efficiency-wages would, in case of genuine technical progress, increase pay-rolls, at least temporarily, and bring this case closer to the case of intensive growth.

[13] These are abstract distinctions. In economic reality, technical progress and intensive growth go hand in hand.

price of this factor. On the other hand, we call it "technical progress" if, without any increase in the amount of the factors of production, production increases as a result of improved technical or organizational devices. In the event of technical progress, defined in this manner, the total monetary expense remains constant, despite increased production, so long as the prices of the factors of production do not vary; hence the price of the product can be lowered in proportion to the increase of quantity without bringing any loss to the enterprise.[14] As distinguished from real technical progress, the case of intensive growth is characterized by an increase in the total of real costs; given the different prices for the factors of production, a rise in the total of monetary cost follows.

The objection might be raised that the assumption of unchanged prices of the factors of production is impossible, because, in the case of intensive growth, other things being equal, the price relations of the elementary factors of production will also be changed. But if, with an increase in capital, we find a falling interest rate, the nominal wage rate must rise by way of compensation. If this were to be prevented, however, by a general decline in the prices of the finished products (since the price level is not stabilized), then a lowering of both interest rate and interest sum will be necessary in order to adapt the relations between labor share and capital share to the changes in marginal productivities. Consequently, the pressure of monetary deflation cannot but become apparent in the necessity for a general reduction in the book value of invested capital. (In the case of technical progress in capital-goods industries, a similar reduction of book values might become necessary; but in this case it is not aggravated by decreasing receipts of the enterprise.)

It is here unnecessary to discuss the case of "extensive growth" in which capital and labor (or more exactly, all factors of production) increase proportionately to each other. The new labor force

[14] This is, of course, not quite correct if the elasticity of demand is less than unity. But on the average, this elasticity is axiomatically equal to unity. No doubt, if technical progress should occur in industries with a lower elasticity of demand, some withdrawal of factors of production from these industries and a rearrangement of the whole economic system would be necessary. But that could not be prevented by price stabilization.

and the additional capital become combined in factories in the customary fashion. In this case, refusal of the classicists to increase the quantity of money does not seem so definite. Formally, intensive and extensive growth are closer together than intensive growth and technical progress.

The foregoing considerations, which have thus far taken us along well-worn paths, have led to a valuable result. The second principle of the classical theory, which stresses the indifference of the price level, can, when viewed in the light of business-cycle policy, be upheld only with important qualifications. We may say that all those cases of depression are caused by relative deflation of a purely monetary character, in which the pressure is produced by the lack of correspondence between the growth of the system (intensive or extensive growth) and of the current stream of purchasing power. No particular business-cycle theory would be necessary to explain this phenomenon. Here, relative deflation acts exactly the same as an absolute decrease in the money-stream.

On the other hand, we may treat cases of technical progress under the assumption that the stream of purchasing power is constant. Considered from a practical viewpoint, this means that we are sponsoring the stabilization of average income rates; or, expressed in other words, to avoid the difficulties in the average concept, we are advocating such an increase of the money-stream as will permit the different income rates to be changed in strict correspondence to the changes in the relative marginal productivity of the respective factors. Stating the issue in this manner makes possible also an answer to the theoretical question: How shall we judge all the mixed cases in which genuine technical progress is linked with an increase in capital per person, and this not only in a single enterprise but also in the whole economic system? Under these circumstances, constancy of the money-stream would also induce deflation of a purely monetary character. On the other hand, an increase in the money-stream, proportionate to the increase in the current output, would produce inflationary effects, as in the case of purely technical progress, by suddenly enhancing the profit margin. Here also, by stabilizing the income rates, both dangers are avoided.

We have used the term "money-stream," as distinguished from the money stock, in the usual manner, to stress the fact that hoarding and liquidating brings about monetary deflation in the same manner as the physical destruction of money. It must be pointed out, however, that there exist two different money-streams, linked together, but not always varying at the same rate, namely, the income fund and the business fund. Out of the first, consumers' goods are paid for, and in a progressive economy, also additional capital goods. By means of the business fund the turnover of intermediate goods is operated; it represents the demand for producers' goods, as far as they are not "additional" and to be bought out of savings. In cases of growth, both funds are assumed to be increased. This is self-evident in the cases of extensive growth, but true also with intensive growth, because the larger the capital, the larger also the turnover in the higher stages of production. Moreover, in the latter case the business fund must be increased to a greater extent than the income fund, because the rate of increase will be smaller for the net product than for the capital stock.

Thus, one of the basic principles of the Law of Markets is invalidated. On the other hand, considering this law from the viewpoint of business-cycle theory, as distinguished from monetary theory, Say's doctrine is in some ways confirmed. We can venture the opinion that general overproduction, which might threaten more than half of all branches of an economic system with lack of markets and deficits, is essentially a monetary phenomenon. This does not mean, however, that it has only a monetary cause. General overproduction is essentially a deflationary phenomenon, whether it be an absolute deflation (i.e., an absolute reduction of the money-stream) or relative deflation, in which case the current output of commodities increases more rapidly than the money-stream, for reasons other than technical progress.[15] This point of

[15] In the admirable presentation of business cycles in the *Allgemeine Volkswirtschaftslehre* by Wilhelm Lexis (2d ed., 1913) this is clearly expressed (p. 199): "Die zu Krisen führende Überproduktion dagegen ist insofern eine allgemeine, als sie aus einer allgemein wirkenden Ursache hervorgeht, nämlich aus der Unzulänglichkeit des in der Gegenwart verfügbaren Gesamteinkommens zur Aufnahme der Gesamtproduktion zu den nach den Bedingungen der Vergangenheit berechneten Preisen."

view will be taken when we examine the two most important nonmonetary theories of crises—the theory of underconsumption and the theory of overcapitalization. However, this essay does not claim to be an exhaustive critique of these theories or a complete theory of cycles and crises.[16] It merely endeavors to further the understanding of the problem by emphasizing certain aspects of it. This examination will also afford the opportunity to return to Say and to his automatic adjustment of the quantity of money to the volume of production.

II. UNDERCONSUMPTION

A. THE MONETARY BASIS OF THE THEORY OF UNDERCONSUMPTION

We may distinguish between two distinct types of underconsumption theory. There is, on the one hand, the school that follows the classical formulation of Rodbertus;[17] in this group are included R. Luxemburg, Sternberg, and Löwe (Marx's attitude was doubtful), and, independent of Rodbertus' followers, the English author, J. A. Hobson. On the other hand, there is a school of more popular theorists represented, for example, by Foster and Catchings[18] and by A. E. Powell;[19] these writers work with more primitive argumentation. In reference to this second group, a few remarks will suffice.[20] If we assume, as, for example, Powell does, that the quantity of goods and the quantity of money do not grow simultaneously, that there is a lag between them, the quantity of money growing less rapidly than the quantity of goods, deflation follows necessarily. Foster and Catchings even hold that every profit-making transaction necessitates an increase in the quantity

[16] See my contribution to the publication in honor of Spiethoff: "Die Schichtung der Konjunkturtheorie" in *Der Stand und die nächste Zukunft der Konjunkturforschung* (München, 1933).

[17] Sismondi and Malthus may be disregarded here.

[18] Primarily *Profits* (Boston and New York, 1925).

[19] *The Flow Theory of Economics* (London, 1931). The writings of C. H. Douglas follow the same line of thought, although on a lower intellectual level.

[20] For a criticism of Foster and Catchings, see my article "Zur Theorie des wirtschaftlichen Gleichgewichts" in *Kölner Sozialpolitische Vierteljahrsschrift*, July 6, 1927, pp. 105 ff. Hayek's brochure: *Gibt es einen Widersinn des Sparens?* (Vienna, 1930) deals with these authors primarily as Souter did earlier from the point of view of the indifference of the price level.

of money over that which existed at the beginning of the production processes, because otherwise the entrepreneur could not take in more money than he had paid out as costs. Obviously, they have confused the procedure of a single act in production and turnover with, first, total transactions of an enterprise, and, second, with the total transactions of a whole economic system, in which usually profit is not hoarded in the form of money but consumed or invested in kind. In the case of a growing economy, Foster and Catchings endeavor to deprive us of the time-honored solution to the problem by means of a proportionate increase in the stream of money.[21] They contend that the money newly created by expansion of bank credit does not reach in time the sphere of income and does not function as additional demand for the increased supply of goods.[22] However, this thesis can be easily disproved by a closer analysis of the circulation of money.[23] (Even Foster and Catchings have never completely elaborated their argument.) Since a considerable part of the additional money created by credit is paid out immediately as wage fund, whereas the additional production usually takes time to reach the stage of definitely finished goods (available output), it is much more probable that additional supply lags behind additional demand than the other way round. Indeed, the whole traditional theory of capital stresses as its main function that capital has to bridge the gap between the demand of laborers producing the capital goods and the additional supply of finished consumers' goods, eventually created with the help of these capital goods.

It might be doubted, however, whether the modern credit system is always able to provide the economy with a sufficient amount of purchasing power, preventing, in this way, deflationary pressure. But, at all events, Foster and Catchings cannot deduce such an incapacity from their own premises. Neither would

[21] Whenever we speak, in this connection and in the discussion to follow, of the "money-requirements of price stabilization," we shall have to assume the clarifying limitations which we laid down in the first section: that production increases, resulting purely from technical progress, are to be left out of consideration in computing the rate of growth.

[22] See *Profits*, p. 317.

[23] See my article on "Kreislauf des Geldes" referred to; also *Profits*, pp. 254–55.

it suffice to deduce such an alleged credit scarcity from causes that are not inherent in the capitalistic system, but produced by more or less accidental factors, as, for example, the nature of the national currency system. The recourse to this kind of explanation means explanation of crises by pure deflation. Only the underconsumption theory in its classical form has seen this central problem (deducing the lack of purchasing power from the essence of the capitalistic system) and has attempted to give an answer.

The classical type of underconsumption theory rejects from the outset all purely monetary considerations based on the quantity theory of money; not the quantity of money, but the value of money is presumed to be constant: the quantity of money grows in proportion to the growth of the economy. But, according to this theory, this cannot prevent a discrepancy from arising between the structure of production and the distribution of demand among the various produced goods. According to Rodbertus, the iron law of wages, with its unvarying real wage, causes a lowering of the income quota of the working-class with the growth of production, while the traditional distribution between capital and consumers' goods goes on. The purchasing power of those people who utilize their incomes primarily for the acquisition of consumers' goods remains relatively retarded, so that the supply of consumers goods cannot be purchased at its cost price. The ideas of Luxemburg and Sternberg are basically the same. Thus, according to their theories, even in case of a slow development of capitalism, the adaptation of production to demand is impossible. We find the essentially dynamic element of the theory of underconsumption first in the writings of Löwe,[24] in which the possibility of such an adaptation is not denied. However, technical progress which occurs during periods of industrial revival is made responsible for sharply reducing the demand for specific consumers' goods, by displacing labor and thereby shutting off its demand for specific goods consumed *en masse*.

In the following section we shall examine more closely the relationship between production and demand. Here we are, first of all,

[24] "Wie ist Konjunkturtheorie überhaupt möglich?" *Weltwirtschaftliches Archiv*, October, 1926, pp. 185 ff.

interested in the main question of the relation of the theory of underconsumption to the Law of Markets. Granted that there is a possibility of changes within the structure of income and demand, that discrepancies occur between the structure of production and demand, how do we explain the sudden disappearance of purchasing power? Does not that purchasing power which has been held back from the workers for some reason or other accrue to the entrepreneur, so that total purchasing power and total production, calculated at the previous price level, remain in balance? And does not the effect of this accrued purchasing power in the hands of the entrepreneur increase profit, improve business, and produce all the symptoms of "underproduction" in a number of industries? Following the lead of Rodbertus, theorists of the underconsumption school have answered this question with the thesis that this profit-increase cannot be "realized"; for profits are derived from the sale of goods and goods cannot be sold at a profitable price when the masses lack purchasing power. Löwe also advances this basic objection: "Die Profitsteigerung des Kapitalteils kann sich erst durchsetzen, wenn auch die Produzenten jener überschüssigen Konsumgüter durch Absatz ihrer Waren den auf sie entfallenden Profitanteil realisiert haben." This answer is, however, inadequate, because it does not explain the phenomenon of the destruction of nominal purchasing power. Purchasing power can be destroyed only by monetary processes like hoarding, discharging of bank debt, etc.; it does not disappear simply because production and sale of goods has undergone some structural changes, for goods have not the purchasing power required to buy them tied around their necks. This becomes clear if we suppose a stationary economy with a constant volume of production and a given amount of government paper money as the only medium of exchange. Then suppose that we subject this economy to a sudden rise in savings and a corresponding contraction in consumption. The producers of consumers' goods will undoubtedly find themselves unable to sell parts of their supply or will be able to sell them only at a loss. They are unable to "realize profits." But since the nominal amount of purchasing power remains the same, only two alternative explanations are possible: either

the income recipients hoard, for some reason, the amount not spent on goods, in which case we have a genuine deflation-crisis, or they use it for the purchase of producers' goods, in which case they create a prosperity for certain industries. In the second alternative, overproduction remains partial.[25]

The essential feature is, however, that such investments of the money, which is not spent on consumers' goods, would not take place if we accept the assumption of the underconsumption theory.[26] The reason for that lack of investments is not to be traced to irrationality on the part of the capitalist, or to a rhythmic vacillation between optimism and pessimism, but to purely rational considerations which modify the Law of Markets in a definite direction.[27] If the demand for cigars changes over to that for cigarettes, the overproduction in the cigar industry must correspond to an underproduction in the cigarette industry. The relation in this case is a horizontal one in parallel branches of industry. It is different if we consider the case of vertically related branches of economy, such as, the relation between producers' goods and consumers' goods industries.[28] If all consumers' goods industries should suddenly be deprived of markets, owing to a sharp decrease in demand for consumers' goods, there would also be a decreased amount of investments, because the profitableness of investments is dependent upon the profitableness of the production of consumers' goods, upon which, ultimately, even the remotest stage of the production process depends.[29]

[25] At this point it is plain that with the customary system of wage payments at the end of the work-week, even the discharged workers will possess a nominal amount of purchasing power over a certain period of time, the expenditure of which may permit the entrepreneur to realize profits. In case of advance wage payments, it is the entrepreneur, who, with a discharge of workers and reduction of wage total, will find a surplus amount of purchasing power in his hands, which means that the profit has already been realized. (See also the comments by Wedemeyer, *Mit Lohnsenkungen gegen die Arbeitslosigkeit* [Berlin, 1930], p. 10.)

[26] This important nucleus of the theory of underconsumption has been overlooked by Miksch, whose critique of this theory coincides with mine up to this point.

[27] It is Löwe's special merit that he has given these ideas proper emphasis. His influence can be seen in the present article.

[28] In my opinion, the difficulties concerning this distinction are not insuperable.

[29] See Lexis, *op. cit.*, pp. 193 ff.

This falling-off of investments, however, has essential monetary presuppositions, which, if I am not mistaken, have been overlooked by the theories of underconsumption. In this connection, what does the "failure to invest" mean? It must mean either hoarding or liquidation,[30] or the repayment of loans. The latter, obviously, could happen only in our modern credit economy.[31] Recognition of this fact not only constitutes a theoretically indispensable addition to the explanation of crises, furnished by the theory of underconsumption but it is also of decisive significance in understanding the course of modern depressions. For lack of profitableness of investment, credit expansion stops immediately after the crisis (as far as it depends on the action of the individual entrepreneur); whereas the supply of goods continues to be increased because the momentum of production requires time to slow down. The credit mechanism is thus responsible for the pressure of a relative deflation, as well as of the absolute deflation due to hoarding, liquidation, and the repayment of bank debts. This latter fact explains the severity and duration of the modern depression, as contrasted with earlier epochs, during which the destruction of purchasing power was primarily caused by hoarding and liquidation, and terminated rapidly when the coffers of the rich began to overflow with coins. But the working of the credit mechanism explains, also, why the crisis initiated by underconsumption must terminate sooner or later.[32] Emergency forces the dissolution of savings deposits, thus creating new purchasing pow-

[30] It seems useful to distinguish between hoarding of income (which, in times of depression, is bound to be compensated, sooner or later, by dishoarding) and liquidation of capital, which is not necessarily offset by similar processes of compensation. In the latter case the entrepreneur stops disbursing a part of his receipts (by paying wages and purchasing raw materials) but accumulates bank deposits.

[31] This "self-deflation" by repayment of loans constitutes the central point of Schumpeter's theory of crises. It occurs, however, as an inevitable end of a period of technical progress only, if the possibility of a following period of intensive growth (characterized by declining interest rates) is neglected.

[32] The self-intensification of the crisis through the process of hoarding, repayment of loans without new investments, etc., has been recognized and often described in the great depression of 1929–33. The older theory did not overlook this phenomenon, but it lacked the monetary foundation necessary to explain it (see, for example, the writing of Spiethoff, *op. cit.*, pp. 80 ff., dealing with the intensification of the depression through lack of capital investment). With Zwiedineck-Südenhorst (*Weltwirtschaftliches Archiv*, October, 1931, p. 361) the futility of this vicious circle

er by way of credit; and hoarding, liquidation (in the form of bank deposits), and the payment of bank loans leads eventually to a condition of liquidity that almost forces the granting of new credit to those industries which have readjusted their cost or show profits for other reasons.[33]

Hitherto we have assumed the correctness of the investment theory expounded by the underconsumption school. But this correctness is in fact very much disputed by the "orthodox" theorists. According to this orthodox opinion, investment does not depend on the profitableness of the lowest stage of production, but on the rate of interest alone. In our opinion, the "orthodox" theorists neglect the importance of the *level* of the demand for capital, whereas the underconsumption school neglects the significance of the *form*. On the whole, however, this latter school seems to be right, because shifts in the demand curve could easily wipe out all advantages from a declining interest-rate level. That proposition needs a further explanation.

According to the orthodox opinion, the opposite is true: on the higher stages of production, the losses arising out of a declining demand for consumers' goods on the lowest stage are more and more compensated and ultimately wiped out by the accumulating advantages from lower interest rates. But if we consider, for the sake of the argument, the different stages as combined in one vertical concern, we see at once that the money-receipts of this concern easily could fall below the amount of the wage bill alone (assuming a deflationary process going on), so that even a decline of interest rates to zero would not be an adequate compensation.

This simple consideration would definitely demonstrate the possibility of underinvestment, if we might suppose profits as evenly distributed in the capitalistic system. This, however, is not true for the standard case of perfect competition, in which a de-

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becomes clearest, since the monetary basis of this description of cycles is removed. He considers not the nominal quantity of purchasing power, but the income as the fundamental datum of the economic system. See also Aftalion's theoretical explanation of general overproduction, which is based upon the hopeless attempt to segregate the nominal changes of income from their monetary basis (*Les crises périodique de surproduction* [Paris, 1919], II, 274, 342).

[33] Especially for technical progress; investments in foreign countries with lower wage rates belong to the same group.

clining demand would only wipe out *marginal* producers, but permit intramarginal ones to continue production with reduced profits. It would, indeed, require an enormous deflation of even today unknown dimensions to wipe out also the profits of all intramarginal producers. In fact, investment stops long before this desperate situation has occurred. The reason is simply that new entrepreneurs cannot expect to win at once the position at the bottom of the supply function. To express it otherwise: in times of a partial crisis of considerable dimensions the risk premium, contained in the price of new direct capital investment, must rise.

Our analysis has confirmed the central idea of the underconsumption theory, if re-written in monetary terms. But it is necessary to examine the theory also from the side of production and income.

Why does the demand for consumers' goods fall short suddenly? Only for a change in the structure of expenditure, or for changes in the structure of production, i.e., for an increase in the supply of consumers' goods? Furthermore: If consumption is reduced and the profitableness of consumers' goods production is disturbed, could not investments continue to be made, provided they were so directed that the supply of consumers' goods would not increase at all; that the investments would be limited to an extension of production facilities? This solution to the problem, i.e., "of turning to higher and higher stages of production," has often been pointed out in criticism of the theory of underconsumption, without adequate analysis of the process of investment in the capitalistic system.[34] In answer to this, the underconsumption theorists maintain that, in addition to the vertical connection of profitableness which exists between consumers' and producers' goods industries, there is also a technical relation between the two spheres: additional investment in any sphere produces a surplus of finished consumers' goods which require a market.

B. CHANGES IN THE STRUCTURE OF PRODUCTION

According to the principles expounded in the first section, we can obtain a satisfactory answer to the main questions of the

[34] In this respect, my article, "Die Unterkonsumtionstheorie als Imperialismustheorie," *Kölner Sozialpolitische Vierteljahresschrift* (1925), pp. 205 ff., is also inadequate.

underconsumption theory only by rigid distinction between the different types of capitalistic evolution, i.e.—(omitting the simple case of extensive growth)—intensive growth and genuine technical progress.

Turning first to the case of intensive growth, how far is the profitableness of consumers' goods industries threatened by the increase of production of such goods, assuming consumers' purchasing power increases proportionate to current output, but without changes in the spending quota? To avoid unnecessary complications, we may assume at the outset that the amount of capital per person is the same in all industries. Increasing supply of capital consequently means a proportionate lowering of the money costs per unit in all industries. Since under conditions of equilibrium the marginal productivity of capital (measured in terms of value) is the same at all points of the system, investment is spread over the whole economy and tendencies to increasing production must be visible everywhere. That is even true in industries dominated by oligopoly, since oligopoly tends to be commuted into perfect competition as soon as technical changes seem to give a definite advantage to one competitor.

Nevertheless, the increasing production has to be adapted to the demand. The point to which investment is driven in any branch of the economy is partly dependent on the form of the marginal productivity function; the faster productivity declines the sooner investment stops. The form of the function, however, is not only dependent on technical conditions but also on the behavior of demand. Not only physical productivity, but value productivity, matters. If, for example, physical productivity should decline very heavily in a certain high stage of production, the product of which is, however, indispensable for the production of consumers' goods strongly in demand, a price rise in this higher stage would compensate for the decline of physical productivity and secure a sufficiently high value productivity to enable additional investment.[35]

In the same way, elasticity of demand will partly check and

[35] For similar technical reasons a concentration of investment in producers' goods industries might sometimes occur. We shall discuss this point later. This fact could by no means bring about oversaving.

partly foster intensive growth in consumers' goods industries also. The term "elasticity of demand" might, however, not be applied in a literal sense here, for we are assuming a rising income, proportionate to the increase in the current output, whereas Marshallian elasticity supposes a given income. But in a wider sense the concept might be applied also in our case, for the smaller the elasticity, the less, very likely, the shifting of the demand curve on account of income variations.[35] We might even say, without erring far from the truth, that, for a commodity of the elasticity of unity, the expenditure always commands the same percentage of a rising income, etc.

The main question, is, of course, whether these adaptions will go on smoothly or whether there will be a permanent tendency to overinvestment in consumers' goods industries. To answer this question, we cannot take recourse to certain definite trends in the income structure, for the share of the wages must not rise, even if the marginal productivity of labor increases and the marginal productivity of capital decreases during the process of continuous investment. But, nevertheless, we may contend that production will be adapted to the structure of demand without serious disturbances. In many cases, neither the technical change induced by falling interest rates nor the lowering of cost is so important that very rapid changes with all entrepreneurs will be stimulated. Moreover, both the average marginal productivity of capital and the rate of increase of the whole capital stock are so small that the current addition to the net output by intensive growth is not able to create serious disturbances, even if the investment proves to be misdirected into industries with small elasticity. Long before the consequences of these mistakes would have accumulated to a dangerous degree, a rearrangement of the structure of production would have been executed. It might be objected that cases with rising, and, indeed, very high marginal productivity, could also occur. But it must not be overlooked that, although the additional return might be very high, nevertheless, the addi-

[35] Also in the case of rising income, the adaptations are of course achieved through the price-mechanism; since the additional income is devoted mainly to commodities with a high demand-elasticity, a price-fall in the other branches will soon check investment here (and vice versa).

tional costs are determined by the *average* marginal productivity of the factors of production. And only the amount of additional costs, as measured by the additional earnings of the factors, is significant for the adaptability of the structure of production.

The results of the foregoing analysis will not be altered in any important degree if we drop the assumption of equality of capital per person. Of course, there will be a tendency to concentrate investment in all branches of industry[37] where capital per person is relatively large; and therefore the amount of interest saved by the decline in the rate will be relatively high and not offset by the possible rise of wages. Building investment, for instance, is very much fostered by low interest rates. But here also the elasticity of demand is the ultimately determining factor (almost unity in the case of demand for housing accommodations). Above all, the central argument, which is based on the low marginal productivity, is valid here also, if we exclude all merely speculative activity, fostered by inflationary credit expansion. So far, the whole argument has supposed a given spending quota, in order to isolate the influences produced by "accumulation of capital." But the result is not seriously altered if we assume a slow decline in the quota going hand and hand with rising income. As long as the absolute amount of spending continues to increase, there are chances of investment. Even if a considerable fraction of the additional net income should be added to the current stream of savings, this would increase the savings quota only very slightly on account of the relatively small size of the additional income, as compared with the current income.

To sum up, no serious disturbance can occur from the accumulation of capital, as long as the accumulated capital is used only for intensive growth. The situation changes, however, if the newly accumulated capital serves for the rapid execution of technical progress, which otherwise would have to take recourse to the relatively small replacement charges of the invested capital. We have defined technical progress as the introduction of production meth-

[37] They are, on the whole, not more frequent in the sphere of producers' goods than in the sphere of consumers' goods; except in the case of public investments in durable goods (such as waterways), since they do not have to sell their products in the market.

ods which permit a higher output with the same input; discovery of new rich natural resources, or a crop above the average, must obviously be grouped under the same heading. The same might even be said of the price-lowering of an intermediate product, which is produced by intensive growth in an industry with large capital per person. It was pointed out, too, that cases of technical progress might best be treated under the assumption of a constant money-stream (income fund, as well as business fund), since, on an average, costs would be covered by receipts, in spite of increasing production. Consequently, as long as the spending quota of the income remains the same, no *general* overproduction in either consumers' goods industries or producers' goods industries could occur; and therefore opportunities for additional investment must always exist. If, for example, technical progress occurred in consumers' goods industries with a small elasticity of demand and resultant losses, purchasing power would be *added* to the demand for other consumers' goods, in which investment would become even more profitable.

It is not necessary to repeat the same argument in the case of technical progress in producers' goods industries, in which the current demand flows out of the business fund and the savings fund. But we meet quite a different situation if we consider the mixed case, in which technical progress is combined with an increase in capital per person in the whole industry. The execution of technical progress is, in most instances, not dependent on the level of the interest rates.[38] Technical progress has the first claim on the currently accumulated capital. Therefore, in many instances, it will bring about overinvestment and cutthroat competition until the enterprises with the old technique are wiped out. This clearing could not be prevented by keeping the price level stable in these industries, since the attempt to do so would only aggravate the competitive situation and accelerate the tempo of investments streaming into this industrial field. Even if the factories with the old technique belonged to the same enterprise that erected the new one, overinvestment would be fostered by price-stabilizing attempts, because the larger the new investment the

[38] Cf. H. Neisser, quoted in footnote 40.

smaller the decrease in profit rate, on account of the fixed interest charges for the old, now obsolete, factory, assuming a given price level for their products.

This process of competition and wiping-out of obsolete factories is, therefore, inevitable and cannot produce underconsumption.[39] But competition might also create a more serious situation. If the execution of technical progress makes necessary larger units of production, the soundest way would be the fusion of several, hitherto independent, enterprises and the reorganization of the new concern with the aid of additional capital. But in many cases no fusion will take place. Instead, each of the existing independent enterprises will be expanded with the help of the currently accumulated capital, maintaining about the same technical level. Or, to express it otherwise: the stream of savings will be concentrated in certain industries; thus, even if some destruction of already invested capital were to take place, on the whole, the supply of consumers' goods might not only be enlarged but, by concentrating investment, also the sum of money costs in the industries concerned. On the other hand, given a certain spending quota, not the whole corresponding amount of net income would be spent for investment in consumers' goods, but a part of this additional income would increase the savings stream. At the same time, the suddenness of the technical progress would make adaptation impossible. Only by lowering the saving quota—perhaps only by keeping the absolute amount of saving constant—could balance between money costs and receipts in the field of consumers' goods be preserved. But as long as the discrepancy between the structure of expenditure and the structure of production lasts, investment even in those consumers' goods industries that are not concerned by technical progress would soon show producing losses.

Some remarks may be added about the distribution of investments. It was pointed out in the case of intensive growth that investments are spread over the whole field and could by no means be restricted exclusively to the producers' goods industries. But

[39] It might, however, by destruction of capital, bring about unemployment and a change in the income structure. This point is discussed in the next section.

nevertheless, the higher the stage of production the larger the amount of investments, on account of the operation of the law of diminishing returns: if in a certain stage of production the current output is increased by means of capital investment of n per cent, the investment on the next higher stage must be increased more than n per cent in order to secure current replacement of the investment in the first stage.

In case of technical progress, however, there is no general rule about the distribution of investments, which are not at all guided by the price structure. All depends on where the progress occurs. If it is concentrated in producers' goods industries, there might be a one-sided expansion of the sphere during a considerable period of time.

C. CHANGES IN THE STRUCTURE OF EXPENDITURE

In the previous section we have demonstrated that even with a given spending quota, an underconsumption crisis might occur, due to concentration of investments in consumers' goods industries. Now, we have to deal with changes in the spending quota itself, which must produce a discrepancy between demand and supply if the structure of production is assumed to remain unchanged.[40] In emphasizing this point we agree with the original thesis of Rodbertus, that capitalistic crises are produced by the decline of the wage share. Two important qualifications of this original thesis are, however, necessary: only *sudden* changes in the structure of expenditure are important; and, since modern theory has substituted the law of marginal productivity for Rodbertus' iron law of wages, it is very doubtful whether a *permanent* tendency exists to depress the wage share in the capitalistic system.

By restricting our task to the analysis of typical sudden changes in the structure of expenditure, we exclude all accidental diminutions of investment, arising out of political complications or out of

[40] The decline in the amount of spending would afflict industries with a small demand-elasticity less than the other. But that does not facilitate investment, because in these very industries with a small demand-elasticity, investment is much restricted even in the case of a stable price level, as long as the population does not increase.

a distrust in specific economic institutions, which are not inherent in the capitalistic system. Obviously we may distinguish two sets of causes: first, changes in the disposition of their income by people; second, changes in the size of the income itself, i.e., shifting of income to classes with a smaller spending quota. This latter set of causes will be analyzed first. Let us assume that every decline in the income share of the lower strata of the population, especially of workers, diminishes the spending quota.

As far as we can see, there exist only three typical cases that act in this direction: *partial overproduction*, which changes the quantitative relation between labor and capital by destruction of the latter; *technical progress*, which lowers the marginal productivity of labor, sometimes to zero; *inflation*, which might be added as a third case, although its action is restricted in regard to underconsumption.

Partial overproduction is caused either by technical progress in the wider sense (including discovery of natural resources, crop variations, etc.), if the elasticity of demand is less than unity, or by sudden changes in consumers' tastes. The economic destruction of capital, effected in this way, means, however, not only unemployment (unless new capital replaces the destroyed amount) but also a corresponding diminution of the current output. Consequently, if partial overproduction occurs in consumers' goods industries, there is no overproduction in this sphere. Moreover, production would probably be reduced more than demand, since the unemployed do not lose their whole purchasing power. Therefore, underconsumption on account of unemployment can be brought about only by partial overproduction (capital destruction) in producers' goods industries. This case arouses special interest, since here the diminution of wage payments does not go hand in hand with a corresponding increase of profits but is commuting wage payments into money capital.

In both cases, of course, a pressure on the wage rates is inevitable, and consequently there is a tendency to underconsumption. It might, however, be questioned whether this change is really a sudden one, since we have always considered wage rates as rigid. Both viewpoints could perhaps be reconciled by assuming that

wage rates are able to resist a relatively strong pressure for rather a considerable period but would suddenly break down afterward.

Displacement of laborers by technical progress is different from the case of partial overproduction, in so far as it does not necessarily curtail production.[41] Therefore, discrepancy between supply and demand may arise. But here also it would be dangerous, only if the technical progress occurred in producers' goods industries. For, if it took place in consumers' goods industries, underconsumption would merely prevent the entrepreneur from realizing the additional profit, which would otherwise arise from the lowering of the wage sum. No such compensation is available for the entrepreneurs if the costs are lowered in producers' goods industries but demand decreased in consumers' goods industries. Not every technical progress brings about displacement; it might only press the wage level down (as in the case discussed in the last paragraph), and in many cases really *increase* the marginal productivity of labor.

It is very doubtful whether the development of capitalism between the industrial revolution in the first decades of the nineteenth century and the World War has ever shown a genuine displacement of laborers by technical progress which was not quickly compensated by the action of opposite forces. We are not pointing here to the traditional theory of compensation, according to which new work for the displaced laborers is provided in the industries producing the capital goods for the execution of the technical progress, or by reinvesting the so-called "wage fund," displaced in the same degree as the labor power; this theory of compensation is entirely wrong.[42] It is not even possible, in the short run, to expect the compensation from the influence of a *wage decline*, which, in the long run, would bring about a readjustment of the industrial technique and the combination of more labor power with the same volume of capital. But during the period

[41] Cf. H. Neisser, "Lohnhöhe und Beschäftigungsgrad im Marktgleichgewicht," *Weltwirtschaftliches Archiv*, October, 1932, Sec. III, esp. p. 448.

[42] Cf. H. Neisser, *loc. cit.;* Lederer, *Technischer Fortschritt und Arbeitslosigkeit* (1931); Mitnitzky, "Kapitalbildung und Arbeitslosigkeit," in *Archiv f. Soz. wiss. etc.*, (1931), p. 62; Kähler, *Theorie der Arbeiterfreisetzung durch die Maschine* (Leipzig, 1933).

concerned, the compensating forces of a large *accumulation of capital*, attracting the displaced workers rapidly, were apparently strong enough to prevent underconsumption arising from this source. We would, however, not maintain the same for the period of the second industrial revolution after the World War, which very likely resembles, in this respect, the first industrial revolution of a century ago.

As for inflation, it is necessary, before discussing its effects on the spending quota, to indicate briefly, what is here meant by this ambiguous concept. We must exclude all those cases in which the prices of consumers' goods and the income payments rise correspondingly; it is the very discrepancy between the changes in prices and incomes that brings about "forced saving" and a decline in the spending quota. We must exclude, also, the regular slow increase of the money-stream in case of intensive growth, designed to keep the price level stable, because this increase would not interfere with the adaptation of supply to demand, nor could it even be maintained that it would lower the spending quota, since the movement of this quota is bound to be very erratic in an economy which is constantly pressed by deflation.

On the other hand, inflation here includes not only the well-known typical cases of an absolute rise in the price level, namely, a credit expansion, faster than current output during periods of prosperity, and governmental paper money inflation; but as pointed out in Section I, B, inflationary effects are produced also by keeping constant the price level during periods of technical progress, since that brings about a sudden widening of the profit margin.

Both types of inflation differ from the previously analyzed cases of a sudden change in the income structure, in so far as the nominal amount of income in the lower strata is not reduced. Consequently "forced saving" can act only by diverting already invested capital from consumers' goods industries (which necessarily is a slow process) or, more likely, by concentrating the free capital on higher stages of production, thus preventing, at least temporarily, an additional supply of consumers' goods. But where this is the case, there cannot be any underconsumption in the

short run, since demand and supply are dropping simultaneously. In the long run, income rates might rise sufficiently to re-establish the old income structure and spending quota. Since, however, an increase to this extent is not necessary, the *possibility* of an underconsumption crisis at the end of a period of inflation must be admitted. The sudden temporary concentration of investment on higher stages of production will very likely end in sudden increase in the output of consumers' goods, and so make much more difficult the adaptation of the structure of production than in the case of intensive growth.

Besides the change in the income structure, we have to analyze typical changes in the spending habits within a given structure. In most instances the tendencies to spending more and saving less on the part of certain individuals are, according to the law of large numbers, compensated by opposite tendencies in other individuals. *General* tendencies in the whole system seem to arise only in connection with expanded facilities for consumption credits, as were provided during the post-war period by instalment buying and large speculative gains on the stock exchange, which were partly devoted to increase consumption. In both cases additional demand for consumers' goods, otherwise purchased only out of income, is created with the aid of the *capital* market. When instalment buying has reached its upper limit, which cannot be surpassed for one reason or another, or when the stock exchange boom comes to its inevitable end, the sudden decline in the spending quota may be large enough to create an underconsumption crisis.

D. THE OUTWARD SHAPE OF A CRISIS CAUSED BY "UNDERCONSUMPTION"

Thus far we have only proved the theoretical *possibility* of a theory of underconsumption (if correctly stated) as a theory of crisis. It is by no means obvious that we can explain in this manner the real business cycles during the last hundred years with their "recessions" and crises. That the theory of underconsumption must not claim any monopoly in explaining crises will be demonstrated in connection with the theory of overcapitalization in Section III. Only when equipped with data derived from historical studies of the business cycle can one answer the question

as to what rôle underconsumption has really played in business cycles. As we pointed out above, it is very likely that such an investigation would arrive at more positive results for the post-war period than for the period preceding the World War. We are here not concerned with questions of the historical nature of cycles. Yet, we may gather certain criteria, from the analytical results of our previous investigations, which may be of use in answering these questions. When underconsumption prevails, we must find a very definite and typical course of the business cycle.

In an underconsumption crisis it is unavoidable that at the termination of prosperity, and before the crisis, a great supply of capital, and in particular of bank credit, is available. The growing savings find no possibilities of investment, and it is just this circumstance which disturbs the equilibrium between production and consumption. Rates of interest must decline—at least those on investments which are free of risks—although, of course, determination of these pure interest rates is difficult in times of political unrest. One could advance the objection that scarcity of bank credit could come about, however, if the currency system did not permit credit expansion proportional to expansion of production. But in such a case underconsumption would not be the cause of crisis; relative deflation brought about by financial policy would be the cause. If we confine ourselves strictly within the limits of the theory of underconsumption, crises do not occur during periods of credit strain and high rates of interest but during periods of a liquid capital and money market.[43]

It must be admitted, however, that this condition can be obscured by circumstances within the financial organization of capitalism, independent of the currency-system conditions, and that the hour of crises may be postponed to a time when liquidity of the money and capital markets has disappeared. Here, we consider the influence of the stock exchange. At first it appears possible that the handling of the turnover of securities would divert increasing amounts of money for investment.[44] But in this case, we

[43] This applies also to Schumpeter's explanation of crises.

[44] During post-war times this factor could only have played a limited rôle at Continental bourses and hardly any at the exchanges of London and New York.

would deal once more with phenomenon of relative deflation of a purely monetary character, because the assumption of constant value of money made by the traditional theory of underconsumption, strictly speaking, implies that the quantity of purchasing power grows not only in proportion to the production of goods but also proportional to turnover of goods and property titles. Of greater importance, however, is the transition from direct investments to short-term credit (savings deposits in the terminology of Keynes). This indirect way of investment is simultaneously more profitable and more "liquid" during times of frenzied speculation (high interest rates on brokers' loans, due to possibilities of speculative gain). Up to 1929, billions of American capital were used indirectly, by way of brokers' loans, for the purchase of capital goods, as well as consumers' goods. Likewise, the strain on the credit system was aggravated by increasing instalment buying. We have already pointed out how these two factors produced eventually a sudden decline in the spending quota. Here it is important to note that the growing instability of the credit system eventually induced credit authorities to resort to financial measures severely restricting the supply of bank credit, despite the still increasing supply of new capital.

III. OVERCAPITALIZATION

The theory of underconsumption asserts that overproduction exists in the entire range of consumers' goods. On the bases of certain monetary phenomena, and assuming the profit motive in the economic system, this theory can demonstrate also the possibility of *general* overproduction. The theory of overcapitalization, on the contrary, emphasizes overproduction in the sphere of producers' goods.

Undoubtedly this glut in producers' goods industries cannot bring about a general crisis, unless by means of underconsumption. In this respect, underconsumption is the greater danger. However, a high correlation exists between the logical structures of underconsumption and overcapitalization as causes of crises. In Section II, B, it was explained, how under certain conditions technical progress would concentrate investment in con-

sumers' goods industries, and thus create underconsumption. The exact parallel case is obviously the concentration of investment in producers' goods industries under the influence of technical progress, and the resultant discrepancy between the supply of producers' goods and the demand for them, because the additional net product would consist exclusively of producers' goods, whereas only a part of the corresponding additional net income would be saved and would represent additional demand for producers' goods. Equilibrium would be maintained only if the *total* additional income should be saved. In the same way a temporary concentration of investment in producers' goods industries could be brought about by a sudden change in the spending habits or by the sudden execution of technical progress in consumers' goods industries, the achieving of which necessitated an expansion in producers' goods industries.[45] In the traditional theory of overcapitalization, as developed mainly by Spiethoff and Aftalion, this tendency to a temporary "multiplified" investment in the higher stages of production is emphasized.[46] Indeed, general overproduction in producers' goods industries must be the consequence, but consumers' goods industries would show a marked prosperity on account of the surplus of purchasing power spent here. For this reason, even the displacement of laborers in producers' goods industries is not likely to bring about underconsumption, since it would in most cases only reduce the price level in consumers' goods industries to the cost level.

Thus far, overcapitalization is produced by a change in the structure of production, without any shifting in the structure of expenditure. A shifting would represent an additional independent cause, corresponding exactly to the decline in the spending quota as a cause of underconsumption. In two typical ways a sudden decline in the savings quota might be brought about: (1) by a rapid rise in wages, no matter how caused, and (2) by inflation. The latter phenomenon needs a short explanation,

[45] Public investment, too, could be concentrated in producers' goods industries.

[46] For the mathematical formula of the relationship between investment in the sphere of consumers' goods and investment in the sphere of producers' goods, see the discussion between Ragnar Frisch and J. M. Clark in the *Journal of Political Economy*, 1931.

which will also complete the analysis presented in Section II, C. We pointed out there that no discrepancy between demand and supply occurred in the first phases of an inflation, but that eventually underconsumption might arise if income rates did not increase quickly enough to secure a sufficient demand for the increased production pouring forth from a vastly expanded technical apparatus in consumers' goods industries. Obviously, even the opposite development might take place. Income rates might rise so sharply that, instead of underconsumption, undersaving and a lack of demand for producers' goods might occur. But if so, the possibility of a moderate rise of income rates would also exist, just sufficient to prevent underconsumption, yet not so high as to create undersaving.

This sudden decline in the saving-stream might also be called "capital scarcity." But that does not mean absolute scarcity of capital goods, nor is every tension in the capital market and every sharp rise in the interest rate a satisfying indicator of this scarcity. In times of prosperity the chances of investment might be so favorable that even with an increasing supply of savings the price of capital would rise to a considerable degree. Competition would select the definite investor, without creating any crisis, although this situation might stimulate undue credit expansion. Some destruction of capital, however, might be the eventual result of this competition. If the financing of investments with a long construction period (i.e., railways) were not secured in time, it might become entirely impossible. Consequently the already invested capital would become useless. It is explained above (p. 455) how this partial overproduction can create underconsumption and a general crisis.

That the true meaning of "capital scarcity" can easily be misunderstood will be shown by a critical analysis of the following statement of Spiethoff's, in his article on crises:[47]

> The scarcity of free capital ready to be invested and the overproduction of intermediate goods is also a *quantitative disproportion within the realm of commodities* as a whole. . . . . The relationship is that of all complementary goods and of the famous pair of gloves of which one glove is lost. The missing

[47] *Handwörterbuch der Staatswissenschaften*, 4. Aufl., p. 78. I have attempted to give as literal a translation as possible.

glove is scarcity and the other is surplus. . . . . A part of the intermediate goods, therefore, cannot be used as further investment ["Ertragsgüter"] since they are inadequate for that purpose and need to be augmented by workers and their means of subsistence—i.e. consumers' goods of various kinds. This interrelationship of goods is independent of the kind of economic system. . . . .

But how can there be a shortage of workers and their means of subsistence? A condition in which labor power would become scarce in relation to capital,[48] so that factories would have to close their doors for lack of workers, would hardly be characteristic of the economic situation at the end of prosperity. Neither is it obvious why such factories which still have sufficient workers at their disposal should be forced to shut down, partly or completely. The main emphasis in Spiethoff's presentation rests, therefore, upon the scarcity of consumers' goods which would constitute the means of subsistence for the workers. But there cannot be any *absolute* scarcity of such goods, except in the case of an extreme inflation; usually the supply of consumers' goods will be larger at the end of prosperity than at the beginning.

The real explanation is already given above: the saving-stream does not suffice to buy the supply of producers' goods. Or, to express it in another way: out of an increasing net income, the income-receivers are devoting an increasing amount (perhaps even an increasing share) to *consumption*, instead of keeping their consumption almost constant and saving heavily. To this lack of savings corresponds, in the realm of real commodities, a lack of certain "intermediate goods" in certain higher stages of production; the structure of production is not "completed," the additional capital goods, which increase the capital stock before the boom, do not exist in a sufficiently diversified shape.[49]

This kind of "capital scarcity" is peculiar to the individualistic system, in which income-receivers have free disposition of their incomes and the distribution of the net product itself is regulated

[48] The only case is to be found in connection with the lack of capital for continuing investments with a long construction period, as analyzed above. By such misplanning, also, the future supply of labor might be overestimated.

[49] This condition would be described very inadequately as "lack of working capital" (this being defined in the customary sense of goods in process); because durable capital goods—fixed capital—are likewise lacking in the higher stages of production.

by a kind of natural law. A large increase in the money-stream might, for a while, relieve the situation in the producers' goods industries, pressing down consumption; but as shown before, the danger of an eventual collapse, owing to either overcapitalization or underconsumption, is very great, since inflation cannot go on indefinitely. On the other hand, a planned economy could easily avoid this crisis and achieve the completion of the structure by keeping income (and, therefore, spending power) in accord with the *available* output, instead of the *total* output.

It is hardly necessary to point out that capital scarcity in a *more general sense* is entirely compatible with underconsumption, or lack of consumers' demand; whereas, of course, oversaving and undersaving cannot exist at the same time in the same system. If underconsumption is due to a change in the income structure (on account of genuine displacement, or partial overproduction, in producers' goods industries), a more adequate supply of capital, i.e., *capital goods*, would have provided the displaced workers with sufficient opportunity to earn an income. Therefore, it may be said that underconsumption itself is due to a "lack of saving" in the previous period. On the other hand, every attempt of the income-receivers to raise quickly their saving quota would create an underconsumption crisis and thus frustrate itself. Besides, it must not be overlooked that even an increase in the saving quota to 100 per cent of the net income would not necessarily be adequate to supply the additional capital in time, if, due to technical progress, the capital quota per person is moving upward rapidly.

If our argument has confirmed the inevitableness of crises, because of overcapitalization or underconsumption, in a pure capitalistic system, it has refuted, on the other hand, the thesis that no alteration of the system, of whatever nature, could prevent the recurrence of crises. We cannot here discuss the question whether, to reach this goal of economic stability, a wholesome change from an individualistic to a communistic system would be necessary or whether a smoothing of the business cycle could be achieved also within the capitalistic system, by means of state intervention. But we hope that our analysis has contributed something to the solution of this central question.

CONCLUSIONS

Our analysis has shown that Say's Law of Markets, denying the possibility of general overproduction, is only valid if a general lowering of the price level is regarded as immaterial. This thesis is today rarely maintained. Our second result is therefore more important, that the principle of profitableness, which governs capitalistic economy, might compel a contraction of purchasing power under certain conditions, and thus lead to a general glut of markets. In other words, the law of the indestructibility of purchasing power, which is merely a different statement of the Law of Markets, is subjected to severe qualifications as soon as we consider the vertical interrelations between the spheres of producers' goods and consumers' goods. Thus we find ourselves closer to a synthesis of the monetary and non-monetary theories of business cycles—more so than appears possible when reviewing the heated arguments between the two schools of thought. Moreover, a closer connection is established between the theory of underconsumption and the theory of overcapitalization, although these two theories were based originally on different concepts: sudden changes in the structure of expenditure cause either underconsumption or overcapitalization, depending on the direction of the change; technical progress acts in the same way by concentrating investments either in consumers' goods or producers' goods industries. However, it would be too pretentious if we regarded the doctrines of underconsumption and overcapitalization, developed and modified above, as adequately explaining two *types* of business cycles. They represent no more than fragments of these types. In order to present a *complete* explanation and to convert a set of abstract partial mechanisms into typical sequences of real events, further concrete development in manifold directions would be essential, primarily the inclusion of the factor of international relations, as well as a closer consideration of the peculiarities of the credit system.

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EMERGENCY EMPLOYMENT IN THEORY AND PRACTICE

WHAT to do with workers rendered idle by the interplay of economic forces over which they have little, if any, control? This is a problem that has stared us in the face for four years and still awaits a satisfactory solution. All sorts of experiments with emergency employment for the needy unemployed have been tried. But so far such efforts, though of especial interest to relief administrators, have received scant attention from economists. Academic economists have constantly and vehemently condemned "made" work in theory. A number of them have pointed to the discouraging story of each successive attempt to make work for idle men both here and abroad during the last century. But few, indeed, have ventured under conditions so serious as those of late—with one-seventh of the country's population on relief and over half of the unemployed in some cities out of work for more than two years—to press their theories or to point to past failures.

The advantages of work over outright charity are obvious and need not be elaborated here. Though less apparent, the difficulties of an economic nature, inherent in all such attempts to make employment for the unemployed, are none the less serious. Far from being superficial, they are essential. Since the purposes of programs for emergency employment are more easily understood than the economic assumptions, announced or unannounced, upon which such programs rest, it might not be amiss to reconsider, in the light of our recent experience, the problem of emergency employment for the unemployed: to examine the theories underlying make-work employment and to see in how far practice has conformed to theory.

A straightforward, if extreme, statement of the economic principles upon which emergency employment programs are based would read somewhat as follows:

1. Worth-while, "non-competitive" work can be found for the unemployed, which will in no way interfere with other public or private employment.

2. Employment of the unemployed on non-competitive yet socially desirable make-work projects will save the community "considerable ultimate expense."

3. Wage rates can be set for such non-competitive work which will have no effect upon the rates paid for normal commercial or public work.

4. Such emergency employment will leave the worker as well, if not better, prepared to resume his regular work than before he was employed by the relief administration.

In administering work relief programs, it has, of course, been impossible to conform strictly to these principles. Indeed, vacillation, confusion, and flagrant deviations from policies as defined and announced, have characterized the attempts to make work for our unemployed during this depression. We have temporized, improvised, and relied upon methods tried and found wanting during former depressions and in other countries. Now, after three years, some closely in touch with relief work frankly confess the error of their former ways and state that "any conditional mixing of work and public relief (under present conditions) is both socially and economically unsound."[1] Even the Federal Emergency Relief Administration now admits that "as a national program work relief fell short of realizing what had been hoped for it."[2] Previously a similar shift in opinion took place in England, Germany,

[1] See *Unemployment Relief in Pennsylvania, September 1, 1932—October 31, 1933* (Harrisburg, December, 1933), App. II, "The Place of Work in Unemployment Relief," by Roger F. Evans. Also, Emergency Relief Administration, *Unemployment and Relief in New Jersey*, Interim Report, January, 1932, pp. 29–40. Joanna C. Colcord, after a study of *Emergency Work Relief* (1932) in 26 cities in 14 states, comes to the conclusion "that the major portion of funds available should probably be turned into that more economical form of assistance (direct relief)" p. 228.

[2] *Monthly Report of the Federal Emergency Relief Administration, December 1, to December 31, 1933*, p. 6. As of November 1, 1933, about 2 million relief clients were employed by work-relief programs. Over 4 million persons were employed by the Civil Works program at the middle of January, 1933. One-half of the 4 million were taken from relief lists.

and Canada.[3] In fact, in many respects the results of our recent experience with public employment for the unemployed are strikingly similar to those during previous periods of widespread unemployment, both here and abroad. In general the results of these repeated attempts throughout the last half of the nineteenth century and the first decades of the twentieth have been discouraging.[4] This vast fund of experience, both foreign and domestic, furnishes the basis of, as well as the illustrations for, the discussion which follows. An attempt has been made to treat each of the above-outlined principles separately, in so far as that is possible, though obviously the first, second, and third are part of a single question: Is it humanly possible in our interrelated and integrated economic system to put the unemployed at value-creating work in "splendid" isolation?

Non-competitive employment.—To an economist non-competitive work in a competitive economic order may seem illogical if not absurd. In fact, judging from the definitions adopted by the various relief administrations, this concept, even in the minds of relief administrators, is far from clear-cut. In Illinois such emergency work is limited merely to that for which "budgets of the local political units have been unable to provide,"[5] and in New York to "work undertaken by a municipal corporation independent of work under a contract or for which an annual appropriation has been made."[6] The definition adopted by the Reconstruction Finance Corporation confined work relief to "worthwhile projects which could not otherwise be undertaken at the time or in the immediate future." Although New York and Illinois have been re-

[3] See *The Majority Report and the Minority Report of the Poor Law Commission*, London, 1909; W. H. Beveridge, *Unemployment: A Problem of Industry* (London, 1930), p. 232; Leo Wolman, *Planning and Control of Public Works, 1930*, pp. 169, 170; National Industrial Conference Board, *Unemployment Insurance and Relief in Germany, 1932*, pp. 57, 59, 63; H. M. Cassidy, *Unemployment and Relief in Ontario, 1929–1932* (Toronto, 1932), pp. 71, 262, 269.

[4] References in previous footnote and Frederick C. Mills, *Contemporary Theories of Unemployment and of Unemployment Relief* (1917), p. 127.

[5] *First Annual Report of the Illinois Emergency Relief Commission for the Year Ending February 5, 1933* (Chicago), p. 72.

[6] *Emergency Unemployment Relief Laws in the State of New York, 1931–1932* (Albany, October 1, 1932), p. 32.

imbursed in part for their relief expenditures from Federal funds, the rules and regulations of the Federal Emergency Relief Administration state that work relief projects should be confined to public property or private institutions regularly receiving support from public funds, and the work must be "in general, apart from normal governmental enterprises and not such as would have been carried out in due course regardless of an emergency."[7]

It is clear that emergency employment must be of a public nature—of no special benefit to private individuals not on relief. However, it is not at all clear from the above quotations whether the relief projects are to include normal municipal functions which, because of local financial difficulties, cannot be done now or in the immediate future (eligible under the Illinois, New York, and R.F.C. definitions), or whether such projects are to be strictly limited to extraordinary work which normally is not, and otherwise never would be, done (F.E.R.A. definition). There is a significant difference.[8] Under the former definition, which includes normal municipal functions, it is in most cases a matter of judgment on the part of the official or officials responsible for the work whether or not a job would be done and paid for by a regular appropriation, if not done as a relief project. In periods of extreme unemployment many of the local relief officials are also persons who play a significant part in making up municipal budgets. Under such conditions it is possible for local politicians purposely to cut certain items in the budget on a plea of financial embarrassment so that their locality may receive state or federal subsidies for or-

[7] *Monthly Report of the F.E.R.A., May 22 through June 30, 1933*, p. 14. Work relief, it should be observed, differs from public works in that no contracts are let; the labor is hired on the basis of proved need rather than ability and fitness for the job; and little materials or machinery can be used, since wages to relief employees comprise by far the major portion, usually at least 80 per cent, of the total expenditures. Most of the work projects are administered locally, though subject to approval by the state or federal relief administration.

[8] T. R. Malthus, in discussing measures for relieving the distress of the laboring classes after 1815, shows the same confusion of thought. He wrote: "It is also of importance to know that, in our endeavors to assist the working classes in a period like the present, it is desirable to employ them (the poor) in unproductive labour, or at least in labour, the results of which do not come for sale into the market, such as roads and public works" (*Principles of Political Economy* [1821], p. 395).

dinary public work. This has happened frequently and repeatedly.[9]

A municipal director of relief in New Jersey writes: "Permit me to enlighten you on this subject—in the interests of economy we have refrained from putting more men to work at the Disposal Plant on a permanent paying basis, for the reason that from the very beginning of the year we intended to use our unemployed in this connection." In some communities in New York, federal and state funds have been used for ash removal and garbage disposal.[10] A glance at the work projects undertaken in New York State shows that practically all of them would be classified as normal municipal functions. In 1932 over half of them involved the construction or repair of highways, and improvements in parks and playgrounds. The expenditures of the five New York cities which had no work programs or spent less than $1.00 per capita on work relief from November 1, 1931, to August 31, 1932, have been compared with those of the six cities which spent $4.45 per capita or more during that period[11] (Table I).

Although this sample is limited by the lack of cities with little or no expenditures for work relief, the data do indicate that expenditures for those types of public work on which work-relief labor was used (highways, parks, and playgrounds), were sharply curtailed in 1932, while expenditures for many other items were not. In New York, 1932 was the first year of state-wide work relief. Also, this curtailment was in direct proportion to the amount of work relief performed by the city. The foregoing index was compiled for indexes for each of the cities, and the contrast between these two groups of cities was evident in the case of each individual city within the group.

Public corporations of all sorts and sizes have discharged regular workers or cut their pay in order to save funds for the employment of others who urgently need work but who often have

[9] Opinions expressed by the author are based not only upon the material presented in this paper but also upon material which he is collecting for a more detailed study of *Some Aspects of Unemployment Relief* during this depression.

[10] *Unemployment Relief in Pennsylvania, op. cit.*, p. 87.

[11] From *Special Reports on Municipal Accounts* by the Comptroller of New York State.

few other qualifications for the job they are selected to fill. As the *Nation* magazine has repeatedly pointed out, the Federal Government has also been guilty of this "insane policy of discharging regular governmental employees by one door in order to save money to hire unemployed at another entrance."[12]

Repeated attempts in England from 1886 until 1905 to relieve the unemployed by public work "proved to be, to no small ex-

TABLE I

Year	Government Cost Payments for Highways and Recreation (1)	Government Cost Payments Minus (1) and Relief (2)	(1)÷(2)
5 CITIES SPENDING LESS THAN $1.00 PER CAPITA			
1929	100.0	100.0	100.0
1930	104.1	103.4	100.7
1931	112.7	111.2	100.4
1932	107.6	113.2	95.1
6 CITIES SPENDING $4.45 OR MORE ON WORK RELIEF			
1929	100.0	100.0	100.0
1930	110.4	116.7	94.6
1931	113.5	112.8	100.6
1932	84.3	115.4	73.0

tent, merely an arrangement by which some men were deprived of their regular employment, in order that other men might be given, in rotation, a 'three days' turn.' " This policy of robbing faithful Peter to pay Paul relief wages was so evident that "it came to be recognized, even among the workmen, that it was impossible, in this artificial manufacture of municipal work, to avoid anticipating the ordinary employment of the permanently engaged staff of laborers, or that of the contractors, so that the very employment of the Unemployed was creating, for the future, even more Unemployment." Under the Unemployed Workmen Act of 1905 there was "the same inevitable tendency to a shrinkage of

[12] See, for example, *Hearings on S. 5336 before a Subcommittee of the Committee on Banking and Currency, U.S. Senate, 72d Congress, 2d Session*, 1933, p. 118.

the ordinary staffs of the Municipal Department, and to a throwing-out of employment of the regular hands of the Municipal Contractors, because the 'ground work' on which they would have been employed in ordinary course had been given to the Distress Committee, to be distributed in doles of 'Employment Relief' to those who had put down their names as unemployed."[13]

On the other hand, work projects that would not be done even in normal times are obviously less necessary, less worth while and, if at all worth while, more difficult to uncover and administer. In this category of abnormal employment belong the so-called "manicuring" jobs, such as cutting weeds on vacant lots, clearing creeks and gutters, raking leaves, etc., as well as certain "research" projects. Where these projects have not been "sham" work of a "fantastic character," which is "even more deteriorating than direct relief," they have often resulted in special benefits to certain private interests. Of course, it has been practically impossible for local officials to keep relief workers at less important "luxury" tasks while normal and more necessary municipal functions, such as street repair, garbage and snow removal, etc., are being curtailed or dispensed with for lack of funds. The rule or regulation of the F.E.R.A. defining work-relief projects has been constantly and flagrantly violated. Only those ignorant of existing conditions could have anticipated any other result.

Some have attempted to draw a distinction between capital expenditures and current or maintenance outlays. But each of the various types of public expenditure are competing for the available public funds. There is competition for public expenditures just as there is for the spendings of private individuals. Concentration on capital expenditure would, because of the resulting unbalance, cause a relative curtailment of that type of work in the future to the detriment of those dependent upon such public expenditures. If public buildings are improved or constructed by relief labor, the budgetary appropriation for such items will be curtailed relative to appropriations for other items, and building

[13] *The Minority Report of the Poor Law Commission*, Part II (London, 1909), pp. 126, 137, and Sidney and Beatrice Webb, *English Poor Law History:* Part II: "The Last Hundred Years" (London, 1929), p. 655.

tradesmen will be deprived of employment that they otherwise would have had. In the same way, to improve or to construct public roads by relief labor is to deprive contractors and their workmen of work that is normally theirs and upon which they depend, at least in part, for a livelihood. To do necessary public work of a permanent nature by relief labor is not essentially different from attempting to run the schools, the tax collector's office, or the police force as a relief proposition.

It is possible, of course, to increase the total amount of public employment without displacement of the regular force, or relative disadvantage to any group of regular employees. In order to do that the total municipal expenditures for both current and capital account would have to be increased in some nice proportion throughout all departments. There would be no cause for complaint by the regular force if the emergency employment of the needy unemployed could be spread proportionally over all departments with the assurance that neither then nor in the near future would the regular budgetary appropriation of any department be curtailed in any respect, nor wages cut, as a result of such additional public employment. Such a balanced addition to total public expenditures and employment, which did not break down existing standards of public work, might, if it brought about an expansion in money and bank credit along with an increase in the general rate of money-spending, increase the total amount of wage-paid employment in the country. However, in a period when public revenues are decreasing and budget-balancing is the order of the day, even amounts spent for direct or home relief decrease, to that extent, public funds available for other types of public expenditure. As long as budgets are being pared it is practically impossible to employ relief clients with public funds without displacing or replacing regular public employees by unemployed and inexperienced persons hired on the basis of need instead of ability—a most unfair basis of competition for public employment.[14] From our experience dur-

[14] The former Director of Emergency Relief in New Jersey concludes from his experience: "To adopt wage work as a form of relief while cutting down normal construction programs, reducing personnel in government departments, and re-

ing the last three years we have gradually learned that, so long as public budgets are being run through the wringer, the unemployed cannot be employed at wage-paid public work without displacing a part of the regular force or breaking down standards of public work and pay, or both.

The Mayor's Committee on Unemployment in New York City, after a thorough study of the efforts to employ the unemployed there during the 1914–15 depression, and similar attempts elsewhere, came to the conclusion that "with rare exceptions relief employment must directly or indirectly displace workers employed under normal conditions." "There is no improvement," the Committee states, "which, if desirable, would not sooner or later be carried out by commercial or public enterprise employing labor at the customary rate of wages. The only exception to this general statement would be improvements which, though desirable in the public interest, the public cannot afford to pay for at normal costs, and which philanthropists, therefore, may be willing to provide. . . . ."[15]

However, even that exception is questionable. From the middle of 1932 until the Civil Works Administration commenced operations in November, 1933, New Jersey tried what has been termed "work-for-relief." Under this scheme, the relief client was given relief according to his family needs and was asked, after receiving a certain total of provisions, to do some useful public work in return for the public relief he had received. In this case the question of added funds for wages did not enter. Money wages were not paid. The drain on public funds was no greater than if the relief recipients had not been asked to work; yet from all indications a number of communities, some very wealthy ones, halved and even eliminated certain items in their budgets (such as garbage and snow removal, street repair, the upkeep of public

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ducing salaries and wages will more than destroy all the good that can be accomplished by work relief. If such economy is necessary it seems to me advisable to accept it that we cannot afford work relief, despite whatever advantages it possesses" (Interim Report, p. 40).

[15] *How to Meet Hard Times* (January, 1917), p. 101. Joanna C. Colcord expresses the same idea in *Community Planning in Unemployment Emergencies* (Russell Sage Foundation, 1930), p. 33.

buildings, etc.) with the deliberate intent to use work-for-relief labor instead of paying wages to those normally hired to perform such work. The source of funds to pay for emergency employment is less important than the fact that the work is being done and done in only certain lines.

A study of the 1933 and 1934 budgets of six New Jersey cities using little or no work-for-relief labor and six in which relief clients have been used most extensively on municipal work, shows that those cities using work-for-relief labor extensively have curtailed their total budgets considerably more than have those not using relief labor. Yet, judging by debt burdens relative to assessed valuation and the increase in back taxes during the last three years, the group of cities making use of relief labor had less cause for curtailing their budgetary appropriations than did the group of cities which made little use of work-for-relief labor. Also, in the cities where a considerable amount of work has been performed by clients working out their relief, budgetary appropriations for items on which relief labor is usually used, such as streets, parks and playgrounds, garbage and ash collection, snow removal, and upkeep of public buildings, have been curtailed relatively more in comparison to other controllable items (minus relief appropriations) than has been the case in the six cities which neglected to use relief labor to any extent in the latter part of 1932 and in 1933. The situation in New Jersey is somewhat complicated, since, during the first part of 1932, all of the large cities except two carried on programs of work relief under a plan similar to the one in New York State, whereby the state matches a certain percentage of local funds spent on wage-paid employment for relief clients. As in the case of the New York cities, those New Jersey cities spending the most per capita on work relief during the first half of 1932 generally had the largest relative decline in expenditures on public works, parks, and public property in 1932, which is what one might expect.

The Mayor's Committee on Unemployment in New York City also stated in its report: "There is, however, one form of outdoor employment which only indirectly competes with labor employed at normal wages, and that is the self-employment of unemployed

men on land for the purpose of growing food for the sustenance of their own families."[16] In New York State during the summer of 1933 over one million dollars' worth of food was produced in subsistence gardens.[17] Most of these were municipal or community gardens in which the state agrees to reimburse a percentage (40 per cent last year, 75 per cent this year) of the expense incurred by the community for garden materials and supervision. In the community gardens, workers receive wages from the municipality, which in turn is reimbursed by the state (40 per cent formerly, 75 per cent this year), and the products are distributed to the needy unemployed of the community. The counsel of the Temporary Emergency Relief Administration of New York has ruled that "garden work done for wages paid by a municipal corporation falls precisely within the definition of work relief under the statute," and is subject to state reimbursement. Yet the same counsel refused to approve as a work-relief project the opening of a mill, donated free, for the manufacture of a cheap line of sweaters, underwear, etc.—the wages to be paid by public appropriation and no part of the product to be sold in the open market. The reason for rejection, according to the counsel, was that "there is a long line of cases holding that a municipal corporation is not entitled to engage in business in competition with private interests."[18] The logic behind this double standard for different types of economic enterprise is somewhat difficult to comprehend.

There has been an almost old-maidish precaution to see that nothing is done which will disturb "existing channels of trade"; that is, the organized channels of trade. Nevertheless, there has been no compunction about putting the unemployed to work at unorganized occupations such as tailoring, shoe-repairing, woodchopping, or farming. Not only have a number of states subsi-

[16] *Ibid.*

[17] *New York Times*, April 9, 1934. In 1933 and 1934 the relief burden in New York was "lightened by the amount of the produce of these gardens estimated at a value of $1,500,000."

[18] *Emergency Unemployment Relief Laws in the State of New York, The Interpretation and Application of the Emergency Relief Laws* (Albany, October 1, 1932), pp. 124, 144. A mill was so used in Massachusetts. See the *Nation*, April 18, 1934, p. 445.

dized wood-cutting and subsistence gardening by the unemployed, but, in a number of cities, clothing and shoe-repair depots have been established into which relief-receiving cobblers and tailors have been moved, machinery and all, in order to take care of the needs of the unemployed in those lines. When the recipients of relief have been put to work at private occupations and business by relief administrators, they have been placed in the unorganized lines of business, like farming, that have been hardest hit by the depression—hardest hit because those engaged in them have been unable to control prices and production as have some large-scale industrialists and bankers. In such cases, the employment of the unemployed has only added to the disparity and unbalance between (say) agricultural prices and production and industrial prices and production—a disparity which helped to explain and to prolong the depression.

The argument sometimes used to justify these activities of the unemployed in unorganized enterprise is that their products are for their own use and not for sale. It runs something like this: If a person on relief grows his own vegetables, then neither he nor the welfare bureau has to pay for them and the money saved will be spent either by him or by the taxpayer, in some other way; normal effective demand (cash spending) will not be decreased. It is true that theoretically normal or existing cash demand should not decrease, while actually it might even increase. But it will be shifted or redirected, and, if the unemployed are put to work producing goods for their own use in only a few lines, production for a cash market will be hurt in those lines, while prices and production in other lines will be stimulated by the spending of the funds saved the taxpayer. There is no assurance whatsoever that taxpayers will spend the funds so saved for the very goods that the unemployed produced for their own use. Here again it is a question of providing a well-balanced program for relief employment if considerable displacement of, or relative disadvantage to, normal employment and production in certain lines of endeavor is to be avoided.

Economy for the community.—Admitting that emergency employment cannot be both "value-creating" and "non-competi-

tive," has the employment of the unemployed at normal municipal work in competition with the regular force resulted in an ultimate saving to the community? Though one cannot give a categorical answer to this question, in most cases the economic results have not been worth the added outlay necessary to provide employment for those on the relief rolls.[19] We have found, as they did in England and Canada, that the relief method of construction is wasteful, inefficient, and "ruinously expensive." According to Professor H. M. Cassidy, Canada has found from her experience with emergency employment during this depression that "in some cases it would have been more economical to have distributed the amount paid out in relief wages as direct relief and to have provided for the construction of civic works later, as they were needed, by ordinary methods."[20] The former director of the Emergency Relief Administration in New Jersey came to a similar conclusion. He states: "In one case brought to our attention a job that would cost $40,000 done by a contractor, using machinery, in good road building weather, actually cost $120,000 using relief employees and hand work chiefly, and done in winter weather. The proportion of dollar efficiency of public made work is reported in New Jersey to vary from 15 per cent to 50 per cent. If $120,000 is to be spent, it will produce three times as much results for the taxpayer done by the contract-machine method."[21] With few noteworthy exceptions the average efficiency of public made-work during this and previous depressions has not been more than half that under normal conditions and contract-machine methods of construction, and in a considerable number of cases the percentage of efficiency has been far below 50 per cent.[22]

[19] How much more it costs to take care of a family by providing work rather than provisions (direct relief) is a moot question. Although the answer depends upon many different factors and conditions, it has been estimated that, on the average, at least one-third more is necessary to provide work. See *Hearings on S. 5125 before a Subcommittee of the Committee on Manufactures, U.S. Senate. 72d Congress, 2d Session*, 1933, pp. 275–76.

[20] *Unemployment and Relief in Ontario, op. cit.*, p. 162.

[21] Interim Report, p. 33.

[22] See *Report of the Massachusetts Board To Investigate the Subject of the Unemployed during the Winter of 1893–1894*, House Document No. 50 (March 13, 1895),

The reasons for the inefficiency and "appalling expense of all make work" are obvious. In Los Angeles during the 1914–15 depression the cost of relief work was "seven times as great as regular road work because of inexperienced labor, many of the men being clerks, bookkeepers, etc., also because the men were physically unfitted to do the work."[23] Nearly every kind of occupation and profession is represented by those registered for work or receiving relief, yet most of the work provided has been of the common-labor variety. Painters, architects, engineers, and white-collar workers have been put to work with pick, shovel, and rake. In a questionnaire survey of work relief in 400 communities, conducted in September, 1933, by the Family Welfare Association, the question was asked: "Are people assigned to projects for which they are especially qualified because of trades or professions?" "Most of the communities replied simply 'No' or that the work was common labor. . . . . Only one city commented on the fact that in planning their projects an effort was made to provide for different trades."[24]

Not only has hand labor been used instead of machines, where possible, but the workers have been rotated, each worker receiving a few days a week or a week a month. They have not been discharged for inefficiency or for "loafing" in order to "make the job last." Much of the work was done in winter when the weather is unfavorable for outdoor work. Many of the unemployed, who would not accept outright or direct relief, did not hesitate to apply for work relief. Some communities proposed elaborate make-work programs in order to profit by federal and state subsidies for normal municipal functions. This in some cases resulted in local

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Part I, pp. xxviii, xxix, 58–107, 179; *Annals of the American Academy of Political and Social Science*, July, 1894, pp. 22, 23, 24, and March, 1895, p. 171; *Journal of Social Science*, November, 1894, p. 40; *The Minority Report of the Poor Law Commission*, Part II, p. 124; Beveridge, *Unemployment*, pp. 176–77, 190; Joanna C. Colcord, an address in *Municipal Work Relief for the Unemployed* (American Society of Municipal Engineers, St. Louis, 1931), p. 28.

[23] "Unemployment Survey, 1914–1915," *American Labor Legislation Review* (November, 1915), p. 576.

[24] See *Unemployment Relief Experience*, by the Family Welfare Association, November, 1933.

irresponsibility. Most of the programs originated, and were administered, locally. In general, the states and the R.F.C. refused to provide funds for tools, transportation, compensation, materials, supplies, equipment, and supervision. The burden of responsibility for all expenses except wage payments was thrown upon the municipalities already overburdened by oppressive debts and mounting tax delinquencies. The municipalities in turn tried to eliminate as much of the non-wage expense as possible. As a result the character of the projects deteriorated. In some places continued work relief had left a dearth of desirable projects. Also, there was constant pressure, before federal funds were made available, to reduce wage rates in order to conserve funds and provide more men with employment at public expense.

Although C.W.A. work was done by force account, and workmen hired and laid off in large part on the basis of need, the program was not simply a relief measure. The motives behind the C.W.A. program were mixed and confused; it was hastily conceived, and in certain instances it was frightfully expensive and wasteful. The war-time haste, with which C.W.A. was organized and set into operation, resulted in an overmanning of many projects, the assignment of workmen to work without proper tools, the initiation of projects of doubtful social and economic value, and the performance of some work actually harmful to the best interests of the community.[25] The primary purpose was to put the men to work—at something. Under C.W.A., compensation and a part of the cost of materials was paid by the Federal Government. At the end of March the Administrator, Harry L. Hopkins, estimated that a billion dollars had been spent on the C.W.A. program in 4½ months (three-fourths for wages and one-fourth for materials and supplies). In Illinois during the first 3½ months, C.W.A. used more than 40 million dollars of federal funds and the average wage in February was slightly more than 70 cents per hour—over 10 per cent of the C.W.A. employees in Illinois were receiving $1.00 or more an hour.[26] The administrative and politi-

[25] See *New York Times*, April 13, 1934, p. 21, and *Report of the Federal Civil Works Administration for Illinois* by Frank D. Chase (March 31, 1934), p. 51.

[26] See *Monthly Bulletin of Relief Statistics, Illinois*, for February and March.

cal difficulties encountered under C.W.A. have been summed up by Lawrence Sullivan in the May issue of the *Forum* magazine.

In many instances mechanics and skilled workers were put to work as a common laborers until more appropriate projects could be planned to which they could be transferred. In part, the statutory limitations of the Public Works Administration, which applied to C.W.A. during the first part of its existence, "made a general distribution of employment on the basis of occupations impossible," since all projects had to be directly or indirectly concerned with construction. The report of the Federal Civil Works Administration for Illinois shows that the projects "gave employment for the most part to unskilled laborers."[27] Eighty-eight per cent of the total C.W.A. pay-roll in Illinois was spent on projects employing principally daily labor. The efficiency of the C.W.A. workers has been estimated at about 65 per cent of normal on certain projects in New Jersey.

Although put into operation almost overnight and practically operating on a month-to-month basis, some municipal budgets were cut with C.W.A. labor in view. The Chairman of the State Civil Works Administration in Illinois warned the county administrations to report "any attempts on the part of local governmental units to use this program as an excuse for substantially reducing local governmental expenditures." He stated that the C.W.A. was not intended as an organization to meet the day-to-day cost of conducting local government. Only "the sort of public works that have heretofore been carried on by public authority, or with public aid, to serve the interests of the general public, are eligible."[28] A table of the "unexpended man-hours" on C.W.A. projects in Illinois, as of February 15, shows that 70 per cent of the work planned was the "gravelling, repairing and ditching" of city streets and country highways, and over 15 per cent of the remaining projects was work on parks and public buildings.[29] The arbitrary distinction that the chairman draws between paying bills for the services of city firemen or the city police department and paying the bills for service on city streets and parks is

[27] *Report of the Federal Civil Works Administration for Illinois, op. cit.*, p. 46.

[28] *Ibid.*, pp. 14 and 15. [29] *Ibid.*, p. 206.

difficult to defend or justify. If the Federal Government foots the bills for certain types of municipal work done on a relief basis, the result is almost sure to be a substantial reduction of local expenditure in those lines of local public activity.

Relief wage rates.—Although scarcely less absurd than non-competitive employment, no one has as yet suggested that there is a non-competitive rate of pay for emergency work, though some of the statements made in behalf of the bill providing for the Citizens Conservation Corps implied as much. Though the labor is assumed by some to be non-competitive, the pay for that labor isn't. Actually, of course, the wage cannot be segregated from the work, nor can emergency work be performed by relief labor without affecting ordinary public employment. If relief recipients work on the streets, they are competing with the regular highway workers, regardless of fine phrases and pretexts. It has even been customary, in many places, for the emergency workers to work side by side with the regular force. If the wages of any or all of the public employees are cut, it may be with the intent to use the funds so saved to subsidize work for the unemployed.

Emergency employment on public work is bound, directly or indirectly, to affect the standard of public work and pay. If less than the so-called prevailing rate is paid, then the emergency employees are, in a sense, undercutting the regular force, and, with an emphasis on economy, there is a tendency for the emergency group either to replace the higher-paid regulars or to force down existing wage scales in public and, perhaps even, private work. If, on the other hand, the same rate is paid both emergency and regular workers, the untrained emergency workers are undoubtedly overpaid, and the regular force is apt to be demoralized. The pace set by the inexperienced emergency workers tends to become the norm. Also, high rates cause relief clients paid such wages to be satisfied with their lot; they draw new clients to the relief rolls, and tend to attract the poorer workers in private employment. These latter tendencies were especially noticeable under the Civil Works Administration. The writer knows of a number of instances where workers gave up other jobs in order to receive the higher C.W.A. wage rates. Some "deflated" public employees

tried to do the same. The Civil Works Administrator of Illinois reports that "the wage rates, particularly for skilled labor, were inflexible, and in many counties so high as to demoralize for some time to come the economically sound wage scales."[30]

Relief wage rates varied widely before C.W.A. commenced operations in the middle of November.[31] The range of relief wage rates in certain instances was too extreme to be explained by variations in the prevailing wages in different sections of the country. The Family Welfare Association's survey of work relief in 400 communities showed that 30 cents per hour was the rate of pay for work-relief labor in 258 of these 400 communities. Nevertheless 90 per cent of the 400 replies indicated that the work-relief rates paid were either more than, or the same as, the going rate—at least in the opinion of those in charge of relief matters in the community. Two-thirds of the communities were paying a single rate regardless of the type or kind of work performed. Many rural communities complained that the 30 cents-per-hour minimum work-relief wage set by the F.E.R.A. was at least double the prevailing rate for farm labor. Under work-for-relief in New Jersey, the credit rate per hour for relief labor was uniform regardless of the effort put forth or the task performed. Under this scheme there was little political or employer pressure brought to bear to have the credit rate set lower than the prevailing rate for common labor in the community (in fact, the relief administration maintained that the credit rate was not a wage rate), yet in many localities and some large cities the credit rate was between 2 and 3 dollars a day. The relief clients employed in the Citizens Conservation Corps have received approximately 1 dollar a day plus subsistence—about half the existing rate. Yet under work relief subject to federal reimbursement and under C.W.A., so-called prevailing rates were supposed to be paid.

There is, of course, no "*the* prevailing rate of wages" for all types of labor within a clearly defined territory and for all kinds of work-

[30] *Report of the Federal C.W.A. for Illinois*, p. 193. See also *Hearings on Administration of the Federal Civil Works Administration* (February 13, 1934), pp. 14, 15, 17.

[31] See Joanna C. Colcord, *Emergency Work Relief*, p. 19 and *Monthly Report of the F.E.R.A., December 1 to December 31, 1933*, p. 6.

men in the same occupation. Skilled labor cannot be completely standardized and definitely classified. What, for example, is the prevailing rate of pay for office workers of the executive type, research workers, or engineers? Actually the wage rates established for different occupations have been unjust in many instances. Under C.W.A. the highly organized trades received rates of pay that some of them had for years been undercutting, whereas the unorganized skilled workers were generally given the minimum rates within each classification because their rates never have been "established by collective agreements." For construction work the rate for unskilled labor ranged from 40 to 50 cents per hour, and for skilled labor from $1.00 to $1.20, yet wages as high as $1.75 per hour were paid. The C.W.A. rates, though recognizing regional differences to some extent, were above prevailing rates for most occupations and as much as 100 per cent above previously existing rates in certain lines of work in some sections. These higher C.W.A. rates tended to bring so-called prevailing rates up to their level. Whether such high rates, as some believe, tended to prevent wage readjustments that were necessary in order to bring about recovery, say in the construction industry, is a difficult question to decide, but one to consider seriously.

Normally, of course, wage rates and standards of public work are more or less set by competition. Public employees are presumably hired on the basis of ability and output, not need. Where poverty, not ability and suitability for the job, is the test for hiring and firing public employees, it is practically impossible to establish a rate of pay for emergency work which will be fair to all, have no effect upon existing rates, and still act as an incentive to good work.

Conservation of labor resources.—Labor, unlike some commodities, cannot be put on the shelf for a period of time without considerable physical deterioration and loss of mental and moral vigor. Employers have reported that men recently re-employed have, in some instances, been unemployed so long that they were not able to perform a good day's work. Made work at regular intervals may help to preserve the unemployed worker's skill and morale, though to put a watchmaker to work with a pick

and shovel, a chemical engineer with a rake, or an electrician with an ax, is sure to have just the opposite effect.

In practice, made work has not maintained morale and standards of work, though probably in a majority of the cases it has been better than no work at all. Without the discipline of discharge, a sense of accomplishment, or an incentive for advancement—there are few if any opportunities to advance—workers tend to lie down on the job. Furthermore, the association of the able-bodied unemployed with the unemployables or unwilling workers has, in many instances, resulted in fixing a low standard of accomplishment.

As the depression lengthened, interest in made work tended to lag, and the projects tended to deteriorate into the "manicuring," for-exercise-only type. Few work projects were planned to provide jobs which those on the relief rolls were qualified to perform. Much of the work was unworthy of the workers. The fact that relief workers very soon realized that their efforts added little to the wealth of the community had a bad influence on their morale. Under such circumstances they felt free to "lean on the handle." Moreover, the work was spread so thin, in order to conserve funds and provide work for as many as possible, that the workers' weekly wages were little more than the cost of provisions supplied gratis to those receiving outright relief.

In a group of unemployed, as the censuses show, a great variety of vocations is represented. In large cities, especially, only a small percentage of the unemployed are unskilled laborers who in ordinary times would earn their living by outdoor work. Men of high caliber fear that they may lose caste or standing in their trade if they accept work "inferior" to their capacities and training. In order to have a salutary effect, emergency employment should possess the characteristics and provide the rewards of real work. It should offer such a diversity of jobs that men can be given work for which they are fitted and trained. Unless the work-relief program is well balanced, covering the various types and kinds of work to be found in private business, waste, inefficiency, and disillusionment instead of relief and economy, will be the result.

Recent developments and prospects.—On April 1, when C.W.A. was hastily abandoned, a new program of work relief was instituted by the Federal Emergency Relief Administration, which remedies some of the defects in previous made-work programs. Emphasis is placed, as it should be, upon the rehabilitation of those on relief. Work relief is extended further into private industry so that more of the workers can be put at the kinds of work to which they are habituated and to which they presumably will in time return. Again "all projects in general must be apart from normal governmental enterprises" but this time "street cleaning, garbage collection, park maintenance and such items as are normally provided for in the local government budgets" are specifically excluded. However, for some unstated reason, "improvement and construction" of parks, waterworks, sewer systems, public buildings, and "limited highway and street work" is permissible. The same artificial distinctions are drawn in a still more confusing manner. Efficiency and fitness for the job are stressed, and a minimum of 54 hours a month or three days a week is established for those working on relief projects.

For communities of less than 5,000 inhabitants a program of "rural rehabilitation" has been devised. The objective "is to make it possible for destitute persons eligible for relief to sustain themselves through their own efforts." Capital equipment—land and buildings as well as equipment, livestock, pigs, and "other necessities"—is to be provided to assist the rural clients to support themselves. The F.E.R.A. is reported to be negotiating "for thousands of acres of county- and state-owned land as a part of the rural relief plan." Where necessary the income of rural relief clients will be supplemented by employment in "other private enterprises or on local public works," at wages paid in kind. However, "it should be the policy of state relief administrations to refuse to extend relief to any family failing to plant and properly care for an adequate garden when the facilities therefor are available." The policy for "stranded communities" is similar to that for rural communities. In other words, relief clients are to be turned into farmers "for their own use," while our more efficient farmers are receiving federal bounties for cur-

tailing the production of their crops and the reproduction of their livestock. Pig-raising is restricted in the corn states by the A.A.A., and the poor unemployed are subsidized by F.E.R.A. to raise them on a small scale and under less favorable conditions. The depressing effect that such an uneconomic arrangement will have upon the standard of living of the country for some time to come is apparent.

For cities over 5,000 in population it is tentatively suggested that the work projects be divided among various types of activity as follows: (1) city and regional planning, 3 per cent of the workers; (2) public work not normally provided for in local government budgets, 30 per cent; (3) housing, which includes remodeling and repair of private houses in lieu of rent for relief families, 15 per cent; (4) production and distribution of goods needed by the unemployed, such as clothing, food, and household furnishings, 15 per cent;[32] (5) public welfare, health, and recreation, 7 per cent; (6) public education, arts, and research, 10 per cent; (7) with 20 per cent unassigned.

Under this new program the trend toward employing the unemployed according to their own needs is evident. It is an attempt to have them contribute to the national income as much as they can, instead of asking them to perform quite useless tasks which add little or nothing to the country's wealth or its total, public and private, real income. The notion of non-competitive work has been given up. Self-help activities play a much more important rôle than formerly. It is estimated that the self-help movement in this country was affording between one-half million and a million unemployed persons whole or part of their sustenance when, under the Federal Emergency Relief Act of 1933, provision was made for federal funds "to aid in assisting co-operative or self-help

[32] The production and distribution of goods needed by the unemployed includes co-operative and self-help associations. Where production units set up by a local work division and commodities are produced in excess of the local relief needs, the Federal Surplus Relief Corporation will assist in distributing them to localities in need of such commodities. This measure has possibilities, especially in view of the wide powers enjoyed by the Surplus Relief Corporation under its charter.

This explanation of the new program is based on news releases of the F.E.R.A. of March 20 and 22, 1934.

associations for the barter of goods and services." Previously a group of economists and social workers had signed a statement urging the federal and state governments to aid barter exchanges, and the Secretary of Labor had pronounced such self-help efforts "really sound and helpful."[33] Up to the end of 1933, over $260,000 had been granted under the above provision to twenty-eight self-help associations in thirteen states, which reported a membership of more than 60,000 persons. According to estimates, the total savings in relief costs effected by these twenty-eight barter and self-help groups since their formation is close to 2 million dollars.[34] Wholesale employment at high wage rates under C.W.A. gave these self-help activities a decided setback.

The economic reason for the rise and spread of such co-operative, self-sufficing exchange units within our capitalistic economy is not difficult to discover. Though there may be a wide variety of opinion as to what caused the depression, there can be little doubt that the difficulties of exchange prolonged and intensified it. Exchange had been dammed up due to price maladjustments and a decrease in spending, with the result that some economic activities were short-circuited from the cash nexus—men were laid off and factories lay idle. The thought then naturally occurs, as it occurred to a number of economists, business men, and workers,[35] why not bring the idle men, idle factories, and surplus crops

[33] *New York Times*, January 16, 1933, and *Hearings on S. 598*, March 23, 1933, p. 25. For a detailed survey of self-help activities see the *Monthly Labor Review*, issues March to June, 1933.

[34] *Monthly Report of the F.E.R.A., December 1 to December 31, 1933*, pp. 9, 10. A rather incomplete survey based on reports from 29 states showed that "an expenditure of about 5 million dollars resulted in the production of raw and canned food and the manufacture of clothing worth about 30 million dollars at the current market prices" (the *Nation*, April 18, 1934, p. 445).

[35] See the testimony of Charles A. Miller, former chairman of the R.F.C., in *Hearings on S. 5336*, p. 5. In January, 1933, the labor groups of Pennsylvania proposed a program which stated: "They (the unemployed) should be given productive work in the closed or idle factories, making shoes, clothing, and other simple necessities for the unemployed. The State and Federal relief funds should be used by a State Employment Authority to manufacture necessities for those who cannot possibly buy them . . . ." (the *Nation*, April 18, 1934, p. 444).

together by means of a central exchange (clearing-house or market for the unemployed) so that the idle can support themselves and do so in a way that will cause little interference with customary trade, no great shifts in the occupational pursuits of the workers re-employed, and no reversion to small-scale methods of production, such as is necessary in local self-contained exchange units? Such an emergency employment organization would have to cover a territory wide enough to give the necessary diversification of occupation and output in order to balance production with consumers' needs. As we have seen, the more restricted the area or type of emergency employment, the more intense and unfair is the competition with certain lines of public or private enterprise. This does not mean that competition cannot be constructive or that the intensity of competition is increased by a general increase in employment and output. It simply means that *an emergency employment scheme cannot emphasize and subsidize certain lines of production and service out of proportion to their importance in the existing public and private economy without causing uneconomic shifts in demand and production for a cash market or an uneconomic distribution of public work. Only by an extensive and well-proportioned program can the total amount of employment in the country be increased by the relief authorities without assisting some at the expense of others not yet on relief.*

It is in this respect that the Federal Emergency Relief Administration's new program is apt to fall down. The F.E.R.A. still maintains that "it is the responsibility of the state emergency relief administrations exactly to define projects and methods of operation," and the states in turn usually pass such responsibility on to the local governmental units which are too handicapped to handle such matters properly. Local attempts at made work have failed. The difficulties and limitations of local attempts at self-help are well known. In the first place, it is well nigh impossible, in any single community, to carry on a well-balanced program. Especially at the start, the unemployed in producing goods for their own use are sure to tread on someone's toes. Also, attempts to provide self-sufficiency by local exchange-unit methods usually

involve a reversion to small-scale methods of production and a marked change in the occupations of most of the workers. The major portion of our unemployment is concentrated in large cities, which are the very essence of specialization and which are fairly distant from food-producing areas. Under such conditions, local, small-scale attempts to make the unemployed in our cities self-sustaining are sure to meet with slight success.

Anyone acquainted with local relief administrators, most of whom hold political office or are business men in the community, will appreciate the inertia that must be overcome and the false notions about non-competition and overproduction that must be eradicated before any program to put the unemployed at work producing the goods that they so urgently need can succeed. Though we do not have overproduction in the sense that everyone has all that he needs or as much as he is willing to work for, the popular notion of overproduction still persists. It has inhibited and will inhibit efforts to employ the unemployed in an efficient manner so that our unused equipment and unemployed men can be set to work producing the goods and rendering the services most needed by themselves and their fellow-citizens. The uninitiate and unthinking more readily accept the notion that "manicuring" jobs, which add little to the standard of living or real wealth of the community, increase the community's purchasing power (since demand supposedly is increased while no new supply of goods is produced) than they do the ideas that real purchasing power cannot be increased except by an increase in total production, that production under proper conditions creates its own purchasing power, and that through exchange supply and demand become only two phases of a single process.

Besides this obsession of overproduction there are numerous practical difficulties, already mentioned, to be reckoned with. Such difficulties have impeded the progress of all localized attempts, in a highly specialized economy, to employ the unemployed at work for their own consumption. Of course, many of these difficulties could be avoided by adopting one of the more extensive and ambitious plans for establishing national or regional

emergency employment organizations.[36] However, a detailed discussion of such plans falls outside the scope of this paper. Suffice it to say that, if properly administered, most of these plans, far from being impracticable, would be much less subject to the economic objections, the confusion and compromise, and the manifold drawbacks that have attended the made-work programs discussed in this paper. Those charged with the responsibility in this matter have not yet apprehended either their problem or their opportunity.

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[36] See, for example, F. D. Graham, *The Abolition of Unemployment*, 1932; and J. B. Cheadle, H. O. Eaton, and C. A. M. Ewing, *No More Unemployed*, 1934. Similar plans not published have been proposed by W. I. King, Hornell Hart, Jacob Baker, and others. In 1894 Edward Bellamy outlined to the Massachusetts Board To Investigate the Subject of the Unemployed a program resembling in many respects certain features of the foregoing plans.

THE GROWTH OF TRADE TO 1913[1]

IN THE last few years attempts to measure the "normal" rate of increase of gold, or that rate of increase which will maintain a stable price level, have attracted considerable attention. Perhaps the most widely quoted result has been the Cassel "three per cent" estimate. This estimate was based upon a study of gold production and the price level in the period 1850–1910, and the method used was based in part upon the assumption that in the period studied the rate of increase of trade, and therefore the rate of increase of the demand for means of payment, was constant.[2] Such attempts to measure the rate of growth of world-trade as have recently been made have likewise assumed, in the main, that the rate of growth has been on the whole constant.[3] But no comprehensive study has as yet been made of the data which bear upon the problem of the rate of growth of trade in the period before the war.[4] And while the data which extend far enough back into the period to be of any significance for our purpose are meager at best, enough are available to merit analyzing. As the statistics for the United States are the most comprehensive, they will be analyzed first. These data are of three kinds:

[1] For criticism and advice the writer is especially indebted to Professors J. H. Williams, W. L. Crum, and E. F. Frickey, all of Harvard University.

[2] J. T. Phinney, "Gold Production and the Price Level: The Cassel Three Per Cent Estimate," *Quarterly Journal of Economics*, XLVII (1933), 647–49, 658–60. It should be emphasized that as far as the validity of the Cassel method is concerned, what the rate of increase of trade actually was is of no special significance, provided that rate of increase was constant. See *ibid.*, p. 659, footnote.

[3] Gustav Cassel, *The Theory of Social Economy* (New York, 1924), pp. 466–67, and in Gold Delegation of the Financial Committee of the League of Nations, *Interim Report* (1930), pp. 74. R. A. Lehfeldt, *Gold, Prices, and the Witwatersrand* (London, 1919), pp. 25–32. Gold Delegation, *Interim Report* (1930), p. 15.

[4] In a somewhat different connection Edie concluded, after a brief survey of physical production indexes, deflated clearings, income and population statistics, and the work of Cassel and of Lehfeldt, that in "the aggregate, world trade and population showed a remarkably constant secular rate of growth before the War" (L. D. Edie, *Gold Production and Prices* [Bloomington, Ind., 1928], pp. 124, 115–25).

indexes of the physical volume of production, deflated clearings, and true indexes of the volume of trade.

It is, of course, commonly recognized that as indexes of the growth of trade physical volume of production indexes labor under several handicaps. Because those indexes which extend back of 1913 are of necessity constructed mainly from data on the production of basic raw materials and semi-manufactured goods, little or no weight has in them been given to the progressive increase in fabrication which has gone on with the passage of time. If due weight were given to the increase in fabrication, the indexes would doubtless show a more rapid rate of growth than they actually do. It is also evident that the whole of physical production is not necessarily co-ordinate with even the goods component of the volume of trade. The actual production of goods is one thing, the number of times they are exchanged for money before they reach the ultimate consumer is another, and if there has occurred any secular change in the rate of turnover of goods from producer to consumer, physical production and the goods component of trade could not have grown at the same rate. A third complication is the fact that the exchange of services is a component of the volume of trade which, with the passage of time, has beyond doubt become a progressively more important one, and which, nevertheless, is given little or no weight in the physical volume of production indexes that we have. Consequently, even if the physical volume index is one which allows for the progressive increase in fabrication, and even if there have occurred no secular changes in the rate of turnover of goods from producer to consumer, the physical volume index would still probably not be an accurate index of the long-term growth of trade.

In view of these several limitations it becomes evident that as indexes of the growth of trade the available indexes of the physical volume of production are of value only as straws indicating the direction of the wind, and it is from this point of view that they are here examined. Of those physical volume indexes that have been constructed only three extend far enough into the past to be of any significance for our purpose. These are the Snyder 49 and 87 item series, which begin in 1870, and the King index which

begins in 1880. In connection with these, the Persons-Tuttle-Frickey index will be examined. This index is of interest because, covering the years 1864–80, it bridges the 1873 transition point in prices.[5]

Study of the chart on which the indexes have been plotted to ratio scale shows that in the years after 1900 the rates of growth of the King and Snyder indexes have been fairly constant, and agree roughly at about 3½ per cent (Chart I). But before 1900 the course of the indexes does not seem to have been regular enough, nor the agreement between them pronounced enough, to justify the conclusion that the rate of growth of the physical volume of production, as measured by these indexes, has been constant. One conclusion that does seem justified is that 1873 was not followed, at least in this country, by an outburst of basic productive activity which some writers believe to have occurred.[6] Apparently there was no increase in the rate of increase of physical production after that year.

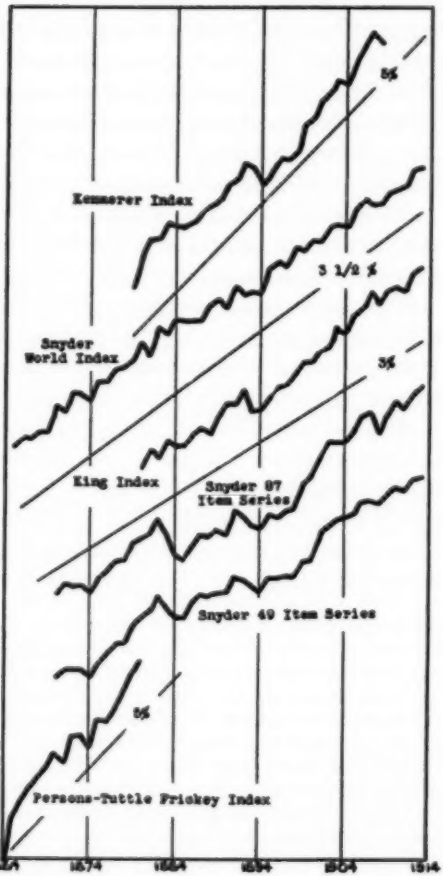
The second type of index of the growth of trade is clearings statistics that have been deflated or corrected for price change. Because it is by means of deposit currency that by far the greater part of the goods and services are exchanged in English-speaking countries, clearings statistics, when corrected for price change, have been held to have considerable significance as an index of the growth of trade. Now as Professor Crum has shown, the process of correcting clearings for price change is not at all as easy as it is often thought to be.[7] But even more difficult of solution would seem to be the complication introduced by the fact that clearings represent not only the growth of trade, but also growth in the use of deposit currency. Growth in the use of deposit currency is

[5] These indexes, with details of their construction, are found in the following sources: Snyder indexes, Carl Snyder, *Business Cycles and Business Measurements* (New York, 1927), pp. 50, 239. King index, *Bankers Statistics Corporation*, August 24, 1920. Persons-Tuttle-Frickey index, *Review of Economic Statistics*, II (1920), Supplement, 25–27.

[6] See for example, W. T. Layton, *Introduction to the Study of Prices* (London, 1922), pp. 67, 101, and Lord Farrer's evidence before the Royal Commission on Agriculture, *Evidence*, III (1895), 156–57, 171–73.

[7] *Review Economic Statistics*, VIII (1926), 92–100.

CHART I



Sources: Persons-Tuttle-Frickey Index, *Review Economic Statistics*, II (1920), Supplement, 25. Snyder 49 and 87 Item Series, Carl Snyder, *Business Cycles and Business Measurements*, p. 239. King Index, *Bankers Statistics Corporation* (August 24, 1920), p. 2. Snyder World Index, G. F. Warren, and F. A. Pearson, *Prices* (New York, 1933), p. 48. Kemmerer Index, E. W. Kemmerer, *Money and Prices*, 2d ed. (1909), p. 131. Because the scales overlap, they have been omitted from the chart.

characterized by an increase in the proportion of transactions that is settled by the use of checks, and a decline in the proportion of transactions that is settled by the use of money. The main evidence as to this change is indirect. It is possible to compute the ratios of individual and of total deposits of all commercial banks to money-outside-treasury-and-commercial-banks for the years 1878–85 and 1896–1913, inclusive. This ratio of individual deposits of all commercial banks to money-outside-treasury-and-banks rose, and rose steadily, from 1.3 in 1878, to 6.5 in 1913, and in the same period the ratio of total deposits of all commercial banks to money-outside-treasury-and-commercial-banks increased by practically the same proportion, from 1.6 to 7.8.[8] Essentially similar results are shown by the studies of Mitchell and of Fisher for the periods 1890–1911 and 1896–1912, respectively. According to Mitchell's estimates of money-held-by-public and demand deposits, the ratio of the latter to the former rose, and rose steadily, from 2.6 in 1890 to 5.0 in 1911. And according to Fisher's finally adjusted estimates of M and M', the ratio of M' to M rose steadily from 3.1 in 1896 to 4.8 in 1912.[9] In the absence of adequate data as to the course of velocities in this period, the change in the actual money work done by each of the two con-

[8] These ratios were computed on the basis of data from the following sources: Money-outside-treasury, *Report of the Secretary of the Treasury on State Finances 1928*, pp. 550–51. Cash holdings and deposits of commercial banks, 1878–1909, National Monetary Commission, *Statistics for the United States* (Washington, 1910), pp. 31, 33, 35; 1910–13, *Report of the Comptroller of the Currency 1913*, pp. 774, 775, 777, 778. Statistics of cash holdings of national banks for 1910–13 were taken from A. A. Young, *Analysis of Bank Statistics for the United States* (Cambridge, Mass., 1928), pp. 12–13, reports nearest June 30.

For the years 1886–95 inclusive the cash holdings items of other than national banks are complicated by the inclusion of cash items.

Although statistics of deposits of private banks are available for the years 1878–83, they have been omitted in computing the ratios of deposits to money-outside-treasury-and-banks. This is because statistics of cash holdings of private banks are not available for these years. In the years before 1896, consequently, the ratios must be regarded as being at best only rough estimates.

[9] Computed on the basis of data found in W. C. Mitchell, *Business Cycles* (Berkeley, California, 1913), p. 302, and Irving Fisher, *Purchasing Power of Money* (New York, 1913), p. 304.

stituents of the circulating medium cannot be determined.[10] On the basis of the data examined, however, it does seem safe to conclude that the importance of deposits, relative to cash, increased greatly in the period before 1913, and that the volume of check transactions presumably increased at a much faster rate than money-plus-check transactions, or trade measured in terms of the actual rather than a constant price level. Consequently, if clearings are an accurate index of the growth of check payments, they can hardly be considered an accurate index of the long-term growth of trade. From 80 to 90 per cent of all transactions may now be effected by the use of deposits, but that this was true in the early part of the period when money-outside-treasury-and

[10] Kemmerer's work on velocity was confined to an estimate of V for a single year, 1896, and to estimates of the magnitude $M'V'$ for years 1879–1908 (E. W. Kemmerer, *Money and Prices*, 2d ed. [New York, 1909], pp. 108–20). The estimates are pretty rough, but such as they are they show a rise in the ratio of $M'V'$ to MV of from 2.6 in 1879 to 5.0 in 1908.

Fisher's estimates of V and V' were based upon actual estimates of V and V' for 1896 and 1909 only. Values for the years 1897–1908 and 1910–12, inclusive, were secured by interpolating, using the estimates for the years 1896 and 1909 as bases (Irving Fisher, *Purchasing Power of Money* [1913], pp. 282–90, 304, 441–78). The validity of such a method depends in large part upon how fair 1896 and 1909 are as bases for a study of velocity, and such evidence as there is indicates that their use is not at all valid. According to Thorp's *Annals*, 1896 was marked by recession and depression, while 1909 was marked by revival and mild prosperity (W. L. Thorp, *Business Annals* [New York, 1926], pp. 137, 140). This would indicate below average velocity in 1896 and average or above average velocity in 1909, and these conclusions are substantiated by Snyder's study of velocity, which shows that the velocity of deposits was much below average in 1896 and slightly above average in 1909 (Carl Snyder, *Business Cycles and Business Measurements*, pp. 152–53). Consequently it is not at all surprising that Fisher's study shows a secular increase in velocity in this period, V rising from 18.8 in 1896 to 22.0 in 1912, and V' rising from 36.6 in 1896 to 53.4 in 1912 (*ibid.*, p. 304). Such as they are, Fisher's estimates of $M'V'$ and MV show a rise in the ratio of $M'V'$ to MV of from 6.2 in 1896 to 11.5 in 1912.

Carl Snyder claims that there has occurred no secular change in V' (*Proceedings Academy of Political Science*, XIII [1930], 471, among other sources), but in his discussion of his index of velocity he is rather vague as to the precise way in which it was derived (*Review Economic Statistics*, VI [1924], 255). Mitchell's study of velocity for New York, Philadelphia, and Boston for the period 1890–1911 tends to substantiate Synder's claim that there has been no secular change in V' (W. C. Mitchell, *Business Cycles* [1913], pp. 308–9).

Des Essars' study of velocity of circulation of current accounts of the Bank of France shows a secular increase in velocity throughout the period 1810–94. In the case

commercial-banks amounted to about 76 per cent of individual deposits, can hardly be maintained.[11]

The next problem that arises is that of the relation of the growth of outside clearings to the growth of check transactions. Were outside clearings an accurate index of the growth of check payments in the period being studied? If Snyder is correct, and there has been no secular change in V', then the volume of check transactions grew at the same rate as did deposits. And as in the period from 1879 to about 1893 total deposits grew at approximately the same rate as did outside clearings (Chart II), it seems safe to conclude that in this period outside clearings were a roughly accurate index of the growth of check payments. But because the substitution of check for money payments, which was occurring in this period, resulted in the volume of check payments growing at a faster rate than the volume of all transactions, the conclusion seems warranted that outside clearings were growing

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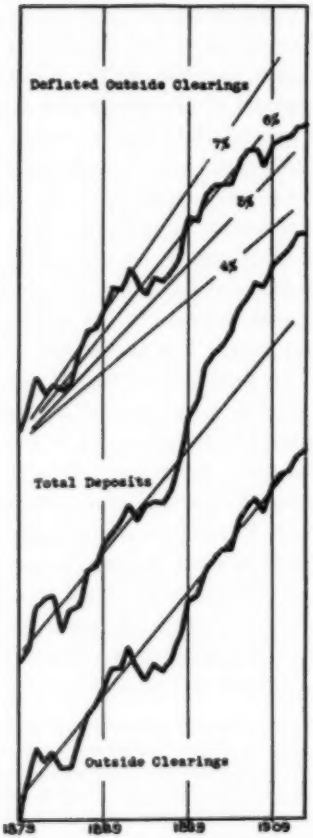
of the National Bank of Italy velocity of circulation increased from 1864 to 1882 and declined from 1882 to 1893. For the other continental banks which he studied his work covered only the years 1884 to 1893–94, hardly long enough a period on the basis of which to draw conclusions as to trend or absence of trend in V'. Such as they are, the results of these shorter studies are contradictory, the central banks of Germany and of Belgium showing a secular increase in V', the central banks of Portugal and of Greece, the Société Marseillaise, the Crédit Industriel et Commercial, and the Société Générale showing secular declines in V', and the Bank of Spain showing a horizontal trend in this magnitude (*Journal Société de Statistique de Paris*, XXXVI [1895], 145–51).

[11] Though Working, in his attempt to develop a method of forecasting changes in the price level (*Quarterly Journal Economics*, XXXVII [1923], 228–56) recognized that in the period he studied (1890–1921) the proportion of transactions settled by the use of deposit currency increased (*ibid.*, p. 234), the significance of this change for the problem of constructing an index of the secular growth of the circulating medium he does not seem to have grasped. If we assume that his index of the growth of bank deposits is a valid one, the increase in the use of deposit currency that occurred after 1890 must mean that the ratio M/P increased at a more rapid rate than the rate of increase of the circulating medium necessary to maintain a stable price-level. Because Working's index of the growth of bank deposits was constructed on the basis of national bank deposits alone, the index is probably not at all valid as a secular index, for despite Working's statement that data "on total deposits in each class of banks show no evidence of even a progressive change in the importance of national banks as compared with other commercial banks" (*ibid.*, p. 255), the fact remains that the ratio of total deposits of national banks to total deposits of all commercial banks fell from .66 in 1890 to .53 in 1913.

CHART II



Sources: Outside clearings, 1879–1909, National Monetary Commission, *Statistics for the United States*, p. 8; 1910–13, *Statistical Abstract 1930*, p. 285. Total deposits of all commercial banks, 1867–1909, National Monetary Commission, *Statistics for the United States*, p. 35; 1910–13, *Report Comptroller Currency 1913*, pp. 774, 775, 777, 778. In deflating, the Snyder General Index was used—Carl Snyder, *Business Cycles and Business Measurements*, p. 286. Because the scales overlap, they have been omitted from the chart.

at a faster rate than trade. In the period before 1893, consequently, deflated outside clearings cannot be considered an index of the physical volume of trade. If we had statistics of the growth of all transactions, expressed in value terms, deflation, if accurate, would give us the course of the physical volume of trade. But when we deflate a value series, such as outside clearings, which was growing at a more rapid rate than all transactions, we obviously cannot secure a valid measure of the physical volume of trade. Snyder was therefore quite right when, as a result of his studies on deflated clearings, he concluded that the more rapid rate of growth of deflated clearings before 1900 than after did not represent a more rapid increase in the volume of trade before 1900 than after that year.[12] But the reason which in one of the studies he assigned for so believing, namely, that the more rapid growth of clearings before 1900 than after represented more the establishment of new clearing houses than a real increase in the volume of trade, was quite irrelevant.[13] It is true that the rate of growth of the number of clearing houses was especially rapid in the years before 1894. But this is of no special significance. The rapid growth in the number of clearing houses does not necessarily mean that the proportion of all check transactions that were cleared increased. The new clearing houses may have been in relatively small centers, and regardless of an increase in their number, it might still be true that the total volume of outside clearings was

[12] *Journal of the American Statistical Association*, XIX (1924), 332. *Review Economic Statistics*, VIII (1926), 89. *Business Cycles and Business Measurements*, p. 142.

In one of these sources Snyder states that "from about 1900 on" there seems to be "evidence that the use of checks had become . . . . nearly universal, at least among corporations and business firms" (*Journal American Statistical Association*, XIX [1924], 332). It should be noted, however, that if the attack on the problem that has been advanced above is sound, the increase in the use of deposits was significant after 1900 as well as before then. The ratio of individual deposits of all commercial banks to money-outside-treasury-and-commercial-banks rose from 3.5 in 1900 to 6.5 in 1913, the ratio of total deposits of all commercial banks to money-outside-treasury-and-commercial-banks rose from 4.4 to 7.8 in the same period, the ratio of M' to M rose, according to Mitchell's estimates of these magnitudes, from 3.7 in 1900 to 5.0 in 1911, and according to Fisher's estimates, from 3.8 in 1900 to 4.8 in 1912, and the ratio of $M'V'$ to MV, according to Kemmerer's estimates of these magnitudes, rose from 4.3 in 1900 to 5.0 in 1908.

[13] *Business Cycles*, p. 142.

growing at no faster rate than was the total volume of check payments. As has been pointed out above, this is apparently just what was happening in the early period. The real reason why in the period before 1893 outside clearings cannot be considered an index of the growth of trade is because the volume of check payments was growing at a more rapid rate than was the volume of money-plus-check payments, or trade measured in terms of the actual, rather than a constant price level.[14]

In the period from about 1896 to 1913 it is not possible to generalize. As was developed above, the volume of check transactions was apparently growing at a faster rate than money-plus-check transactions, or trade measured in terms of a fluctuating price level, and since deposits were growing at a faster rate than outside clearings (Chart II), it is possible that the two discrepancies may have offset each other, and outside clearings have been an accurate index of the growth of trade. But if this were so it would be entirely fortuitous. There is little evidence and no a priori reason for believing that the two differences in rate of growth were compensatory.

In view of these findings it does not seem probable that outside clearings deflated can have much validity as an index of the long-term rate of growth of the physical volume of trade in the period before 1913. Such as they are they show a rate of growth which declined gradually from about 7 per cent a year in the early part of the period to about 4 per cent toward the end (Chart II).

The third type of index of the growth of trade is the true index of the growth of the physical volume of trade. This type of index is the result of an attempt to attack the problem of the rate of growth of trade head-on rather than indirectly, as do deflated clearings. Although this would seem to be the obvious and logical way in which to approach the problem, unfortunately the statistical data pertaining to general, as opposed to basic, activity are meager, and the technical difficulties involved in the construc-

[14] Similarly, it is difficult to see that bank consolidations have any special significance for our problem. Because banks were being consolidated clearings were growing at a slower rate than they otherwise would have grown, but the question still remains whether or not outside clearings grew at the same rate as did the volume of check transactions. That is the problem in which our interest lies here.

tion of the index are great. Because of these difficulties, not much has been done on indexes of the growth of trade, and of those that have been constructed, only two, those of Kemmerer and of Carl Snyder, extend far enough back of 1913 to be of value for the purpose of our study.

As part of his study of the equation of exchange Kemmerer constructed an index of the growth of trade for the years 1879–1908, the period covered by his monograph.[15] Examination of the data on which the Kemmerer index is based shows that they are composed of both value and quantity series. The quantity series are mainly of basic activity, and as was pointed out above, basic activity is probably not representative of general activity over any long period of time. When plotted to ratio scale the index shows a break in trend in the nineties (Chart I), but had the series which are expressed in value terms been corrected for price change, the results would probably have been different. The rate of growth of the index seems to have been about 3.5 per cent in the first half of the period and about 5 per cent in the second half.[16]

Much more comprehensive is the index recently constructed by Carl Snyder.[17] Of his old friends, physical volume of production indexes and deflated clearings, Snyder seems to have become somewhat suspicious. Basic activity is not a good measure of general activity, he now believes, and because the recent speculative boom affected other centers than New York, deflated outside clearings can no longer be taken without reserve as indexes of trade.[18] A direct index of trade is therefore needed. But when

[15] E. W. Kemmerer, *Money and Prices*, 2d ed. (1909), pp. 127–33.

[16] Since the Fisher index of trade covers only the period after 1896, the year in which the trend of prices changed, it is of limited value for our purposes. Its rate of growth seems to have been constant after about 1900. Before then it was more rapid, but this probably represented recovery from the depression years of the nineties and is only to be expected. For a description of the index see Irving Fisher, *Purchasing Power of Money* (1913), pp. 478–86, and for a critical discussion of it see Keynes in *Economic Journal*, XXI (1911), 397.

[17] "New Measures of the Relation of Credit and Trade," *Proceedings Academy Political Science*, XIII (1930), 468–86.

[18] *Ibid.*, pp. 468, 470, 473. Synder formerly believed that while basic and general activity may differ greatly over short periods of time, over long periods no wide changes in the rate of turnover of goods from producer to consumer have occurred,

Snyder examined the available long-term data of the production and distribution of goods, he found that they were largely of "the basic production type, which we have valid reasons for rejecting as trustworthy measures of general trade." There remained "a considerable number of physical series, such as census numbers employed in trade and transportation, horse-power used in manufacturing, number of telegraph messages, number of postage stamps sold, railway tons of freight originating, consumption of gas and electricity, and the like," which were "adequate in number and variety" and which seemed to "afford more secure foundations for a physical index of the growth of trade" than basic production data or clearings. On the basis of these data a new index of the growth of trade in the United States from 1875 was constructed, and examination of this index "afforded a singular surprise," for its trend was found to be "nearly identical" with the trend of deflated outside clearings.[19] Deflated outside clearings are therefore throughout the whole period, and not merely only after 1900, as he formerly believed,[20] an index of the growth of trade, and the rate of growth of trade in the United States in the period 1878–1913 has not been constant. While "over the last half-century the long-term rate of growth of industrial production has remained substantially unchanged," and for the last fifteen or twenty years has been practically the same as the estimated rate of increase of the volume of trade, nevertheless in "the earlier

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and that consequently the volume of trade has increased at the same rate as has the volume of basic production. See *Review Economic Statistics*, VIII (1926), 85–100, especially 100, and *Journal American Statistical Association*, XIX (1924), 190–91, 332.

[19] *Proceedings Academy Political Science*, XIII (1930), 473, 475. And this last quite regardless of the fact that Snyder began the study by questioning the validity of basic activity and clearings indexes as measures of the growth of trade. Snyder goes on to say that this result is, moreover, to be expected "if, on the one hand, this physical measure of trade were close to a true measure and if, on the other hand, the beliefs which I have expressed in the last ten years, first, as to the measurability of the general price level, and secondly, as to the trustworthiness of bank clearings so adjusted, as measures of trade, were sound" (*ibid.*, p. 475). This apparent contradiction is confusing to say the least. Just what does Snyder believe?

[20] *Business Cycles*, p. 142. *Journal American Statistical Association*, XIX (1924), 332.

periods the growth of trade, as we might expect, was more rapid."[21] In his earlier studies this was not at all to be expected, for then it was probable that no "wide changes in the rate of turnover of goods, from producer to consumer" have occurred and consequently "the volume of basic production and the volume of trade . . . . ought for wide periods to show approximately the same broad rate of growth."[22] But now it is to be expected that the rate of growth of trade should in the early years have exceeded the rate of growth of physical production, for beginning "with the immense expansion of our railway systems and the correspondingly rapid development of the country, there was a steadily widening exchange of goods. Food supplies and basic materials were drawn to the industrial centers from steadily lengthening distances, and, in turn, coal and the manufacturerd products shipped to greater and greater distances. Hence, the far more rapid growth of ton-miles of freight moved on the railways than the number of tons. Hence, also, in the earlier period, a more rapid growth of trade than of total product." With "the steady industrial integration of the country," however, "attaining now to something like a geographical equilibrium, the growth of trade and the growth of product became substantially the same."[23]

It is not easy to accept Snyder's latest findings. Among other difficulties the fact that the trend of the new index of trade is "nearly identical" with the trend of deflated clearings means that the problem of the increase in the use of deposit currency, examined above, bulks all the larger. For how can it be maintained that trade was growing at a more rapid rate before 1900 than after, when much of this rapid increase is in the case of deflated clearings easily explained by increased use of deposit currency?

The conclusion of this study of the growth of trade in the United States for the period before 1913 is that in spite of the

[21] *Proceedings Academy Political Science*, XIII (1930), 479.

[22] *Review Economic Statistics*, VIII (1926), 100. See also *Journal American Statistical Association*, XIX (1924), 190–91.

[23] *Proceedings Academy Political Science*, XIII (1930), 479, 481. Layton also believes that the widening of the market which occurred after 1873 resulted in trade growing at a faster rate than production (*Introduction to the Study of Prices*, p. 67).

work that has been done on the problem, little is as yet known about it. That the rate of growth of trade was constant in the pre-war period is still no more than assumption, and the magnitude of the rate of increase of trade can apparently be determined only roughly.

As for the problem of the long-time rate of growth of trade in countries other than the United States, the data are very meager. Clearings statistics for London, Paris, and Germany are available. When deflated by wholesale commodity price indexes and plotted to ratio scale, the Paris and German clearings data show roughly straight-line trends for the period for which they are available, while the London clearings show a decline in their rate of growth after about 1891 (Chart III).[24] The rates of growth of London, Paris, and German clearings were roughly 3.5+ per cent, 7.5 per cent, and 5 per cent respectively.

Carl Snyder's recently constructed index of the world-physical volume of production shows a slight but perceptible break in trend at about 1886, and somewhat slower growth thereafter.[25] The rate of growth was roughly $3\frac{1}{2}$ per cent (Chart I). It is interesting to note that the Snyder index of the world-physical volume of production shows no change in rate of growth in the years

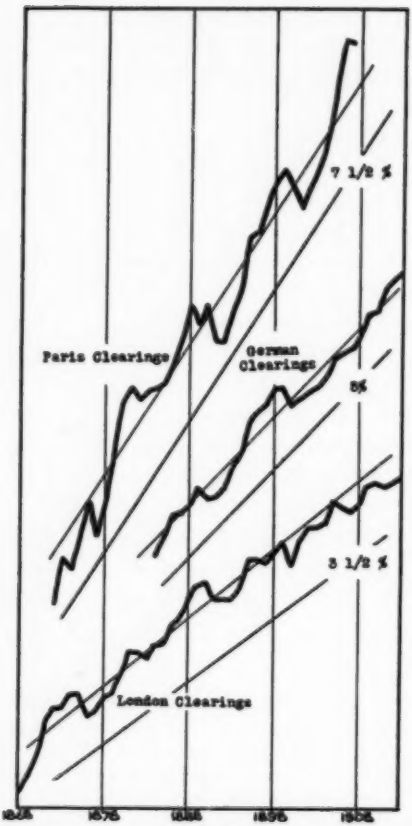
[24] London clearings were deflated by the Sauerbeck index, Paris clearings by the wholesale index of the *Annuaire Statistique*, and German clearings by the Otto Schmitz index.

In his "New Measures of the Relation of Credit and Trade" (*Proceedings Academy Political Science*, XIII [1930], 468–86), Carl Snyder presents an index of the growth of trade constructed on the basis of "such series as were available for Great Britain similar to those used in computing an index in the United States" (*ibid.*, p. 482). Since this index begins in the year 1890, only six years before the trend of prices changed, it is of limited value for our purposes. Such as it is, it shows a slightly decrescent rate of growth.

Julin's index of the economic progress of Belgium for the period 1880–1908 (A. Julin, "The Economic Progress of Belgium from 1880 to 1908," *Journal of the Royal Statistical Society*, LXXIV [1911], 251–303) is too composite in nature to be of use for our purposes. Several demographic and moral elements, such as legitimate births, illegitimate births, marriages, suicides, deaths, and convictions were included in the index, as were also the prices of the principal agricultural products, and several of the series pertaining to basic and to general activity were expressed in value terms.

[25] Snyder tells us that the index is an aggregative index based on "world production of the great basic commodities" and weighted by 1923–25 prices, but gives no details of its construction (*Proceedings Academy Political Science*, XIV [1931], 347).

CHART III



Sources: London clearings, 1868–1908, National Monetary Commission, *Statistics for Great Britain, Germany, and France* (Washington, 1910), p. 12; 1909–13, *Statistical Abstract United Kingdom (1900–1914)*, LXII, 345. In deflating, the Sauerbeck Index was used—Bureau of Labor Statistics, *Bulletin 284*, p. 280. German clearings, 1883–1908, National Monetary Commission, *Statistics for Great Britain, Germany, and France*, p. 152; 1909–13, *Statistisches Jahrbuch 1914*, p. 291. In deflating, the Otto Schmitz Index was used—Bureau of Labor Statistics, *Bulletin 284* (Washington, 1921), p. 254. Paris clearings, National Monetary Commission, *Statistics for Great Britain, Germany, and France*, p. 289. In deflating, the index of the *Annuaire Statistique* was used—Bureau of Labor Statistics, *Bulletin 284*, p. 205. In deflating, the index was lagged one year, i.e., the clearings for 1872 were divided by the price index of 1871. This is because the clearings as reported are for the year ending March 31. Because the scales overlap, they have been omitted from the chart.

immediately after 1873, and the same is apparently true of deflated London clearings (Chart III). In other words, none of the indexes which extend back of 1873 show any evidence of there having occurred an increase in the rate of increase of physical production or trade in the years following 1873. The decline in prices in those years consequently cannot be explained in terms of an increase in the rate of increase of productive activity after 1873.

The conclusions of this study of the rate of growth of trade are mainly negative. In the case of that country for which the most adequate data are available, the problem has not been solved. For the continental countries no comprehensive indexes are available for the period in which our interest lies. And as to what was true of the increase of world-trade there is available only one index, and that is of the physical volume of production. That the rate of increase of trade was constant in the period before 1913 apparently remains little more than a reasonable assumption. And as to what was the magnitude of the rate of growth of world-trade in that period, we are still pretty much in the dark.

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THE INSURANCE OF BANK DEPOSITS

PUBLIC interest in deposit insurance, stimulated by the seriousness of bank failures in recent years, led to the inclusion of provisions for the insurance of bank deposits in the Banking Act of 1933.[1] Many bankers and economists protested. The unfortunate experience of several states with various forms of deposit insurance, the huge losses involved in widespread bank failures, and the fear that insurance would affect banking adversely have led critics to assert that the insurance of bank deposits is unsound.

Discouraged by the failure of state-operated plans, no one has considered what might have happened in the better regulated and supervised national banking system had it been subjected to a deposit insurance requirement at an early date. The purpose of the present paper is to outline that consideration. Statistics of deposits, losses, earnings, and investments in national banks have been considered during the period from the establishment of the national banking system through 1932 in an effort to determine whether or not the cost of operating a deposit insurance plan would have been excessive. Some available statistics of the record of state banks are also presented, but, because incomplete, they cannot be considered significant.

Unless insurance operated to increase losses, the cost of a deposit insurance plan within the national system would have been surprisingly low. Table I shows the average percentage of losses to deposits in national banks from 1863 to 1932. In no decade prior to 1930 did the average annual loss exceed 1/10 of 1 per cent of average annual deposits. Bank losses at no time during this period appeared as general catastrophes from an insurance point of view. Peak losses, which, by the way, seemed to recur cyclically about the middle of each decade, showed a marked tendency to decline prior to 1920. The only years in which losses exceeded $\frac{1}{4}$ of 1 per

[1] H.R. 5661. 73d Congress.

cent of deposits were 1931 and 1932, and in only 12 years did losses exceed 1/10 of 1 per cent of deposits.[2]

Statistical evidence indicates that a premium of 1/10 of 1 per cent of deposits collected annually would have paid, without allowing for interest, all losses experienced by the system prior to October 31, 1931, and, after paying 1932 losses, would have entered the fiscal year beginning September 1, 1932, with a deficit of about

TABLE I

RATIO OF LOSSES TO DEPOSITS AND INSURANCE FUND
NATIONAL BANKS*

Period	(1) Average Total Deposits (in 000's)	(2) Average Losses to Depositors† (in 000's)	(3) Ratio of Col. 1 and Col. 2	(4) Ins. Fund‡ (in 000's)	(5) Ins. Fund with Interest (in 000's)
1863–69	515,920	272	0.00052	1,703	1,730
1870–79	842,760	538	0.00063	4,740	5,569
1880–89	1,454,939	755	0.00051	11,742	15,107
1890–99	2,359,053	2,055	0.00087	14,779	22,167
1900–1909	5,236,818	645	0.00012	60,697	81,887
1910–19	10,227,761	457	0.00004	158,407	219,250
1920–29	19,053,052	14,847	0.00078	200,195	337,579
1930	23,268,884	18,640	0.00080	204,824	351,776
1931	22,198,240	138,472	0.00624	88,550	241,901
1932	17,460,913	108,982	0.00567	2,971§	154,366

* Reports of the Comptroller of the Currency, 1931 and 1932.

† Losses for years 1922–32 inclusive were estimated at 40 per cent or more of deposits of failed banks Higher percentages were used when the record indicated that banks failing in any of these years were experiencing heavier losses.

‡ Assuming an annual premium of 1/10 of 1 per cent of deposits. Status of fund at end of periods.

§ Deficit.

three million dollars. If interest had been accrued annually on unexpended balances in the insurance fund at the rate of 3 per cent, the fund would have paid all 1932 losses and would have amounted to 154 million dollars at the beginning of 1933—a sum in excess of any annual loss encountered by the system.

Since 1896 the only years in which an annual premium of 1/10 of 1 per cent of deposits would have failed to cover all losses within the year were 1923, 1924, 1931, and 1932. Under the premium

[2] Table I was originally presented on an annual basis but spacial limits made the summary by decades desirable.

plan the insurance fund without interest would have reached its maximum of approximately 200 million dollars in 1930. This sum would have been equal to approximately 9/10 of 1 per cent of deposits. In the period 1911–23 the fund, in relation to deposits, would have stood at slightly higher levels, averaging a little over 1 per cent. At no time prior to 1932 would the insurance fund, even without interest, have shown a deficit. The fund without interest would have fallen below 1/10 of 1 per cent of deposits only in 1866, in 1867, and in 1932. After the level of ½ of 1 per cent of deposits had been attained in 1880, the fund would have fallen below that level in only 10 years, seven of which immediately followed 1893. In accumulating the estimated insurance fund no allowance was made for the cost of operating an insurance system. It is probable, however, that the cost of administration would have proved little or no greater than the cost of examining and liquidating banks under methods actually employed.

Figures for the losses of national banks for 1933 were not available at the time the study was made. It is reasonably certain, however, that the annual premium payment of 1/10 of 1 per cent on deposits considered in this study would not have accumulated without interest a fund sufficient to cover all losses for the year.[3] It must be remembered, however, that all losses to depositors whether large or small, are assumed to have been covered by the insurance fund. If only partial protection had been offered to larger depositors, there is no doubt that the fund would have been entirely adequate.

Banking under national supervision has proved highly profitable. The payment of losses out of earnings would have affected only slightly the rate of return on invested capital. In Table II losses on deposits are considered in relation to the net earnings of national banks. Earnings for the 63-year period, 1870–1932, have exceeded 13 per cent on capital, 8 per cent on capital and surplus, and 7 per cent on capital, surplus, and undivided profits. Divi-

[3] The unusual volume of deposits involved in failures in 1897 did not bring excessive losses to depositors. In that year over 8 per cent of total deposits were involved in failures, yet losses did not exceed 1/5 of 1 per cent of total deposits. It is, therefore, possible that the estimates for 1931 and 1932 and the expectancies for 1933 are in excess of what experience may develop.

dends, during this period, having averaged in excess of 10½ per cent on capital and 6½ per cent on capital and surplus combined.[4] Surplus has increased from approximately one-fourth the capital account to a sum in excess of capital. Since the rate of dividends has been highly satisfactory, surplus and undivided profits should be considered as a reserve for the protection of depositors and

TABLE II

EARNINGS AND THEIR RELATION TO LOSSES ON DEPOSITS—NATIONAL BANKS*

(Average by Periods)

YEARS	CAPITAL (IN 000's)	SURPLUS AND NET UNDIV. PROFITS (IN 000's)	NET ADDITIONS TO PROFITS (IN 000's)	LOSSES ON DEPOSITS (IN 000's)	NET RETURN AFTER LOSSES ON DEPOSITS (IN 000's)	NET RETURN AFTER LOSSES		NET RETURN WITHOUT LOSSES	
						To Capital (Per Cent)	To Capital, Surp., and Net Undiv. Profits (Per Cent)	To Capital (Per Cent)	To Capital, Surplus, and Undiv. Profits (Per Cent)
1863–69....	397,690	46,755	†	272	.....	.....	.....	.....	.....
1870–79....	473,787	164,839	50,402	538	49,864	10.6	7.9	10.0	7.4
1880–89....	524,740	213,372	53,942	755	53,187	10.3	7.3	10.1	7.2
1890–99....	652,494	337,340	57,512	2,055	55,457	8.8	5.8	8.5	5.6
1900–1909..	783,762	507,113	117,747	645	117,102	15.0	8.5	14.9	8.5
1910–19....	1,059,239	1,029,197	170,212	457	169,755	10.1	8.1	16.02	8.1
1920–29....	1,304,588	1,657,670	237,844	14,874	222,970	17.0	7.8	16.0	7.3
1930.....	1,743,974	2,137,212	246,261	18,640	227,621	13.1	5.8	14.1	7.4
1931.....	1,687,663	1,937,468	52,541	138,472	− 85,931	− 4.5	−2.1	3.1	1.6
1932.....	1,568,024	1,730,542	−139,780	108,982	−248,762	−15.3	−7.9	− 8.9	−4.9
Av. for 63 Years....	855,343	722,730	112,955	7,320	105,634	12.4	6.7	13.2	7.2

* Reports of the Comptroller of the Currency, 1931 and 1932.

† Data on net profits not available.

stockholders during lean years. If the losses to depositors during the period had been paid out of earnings, the rate of earnings on capital would have been reduced about 1 per cent—to 12.35 per cent—the rate on capital and surplus would have been 7.77 per cent, and the rate on capital, surplus, and undivided profits 6.69 per cent. Assuming that this charge had been levied on dividends, rather than taken from surplus, the rate of dividends on capital

[4] Calculated from data presented in the *Reports of the Comptroller of the Currency*, 1932, p. 71, and 1919, p. 260.

would have been 8.82 per cent, and on capital and surplus 6.11 per cent.[5]

In view of the fact that the Banking Act of 1933 prohibits the payment of interest on demand deposits, the probable effects of this provision on the earnings of national banks, had they operated under a guarantee system since 1918, were considered. In making these calculations, certain assumptions were made: that the tendency to increase interest costs by the shift of demand deposits to time deposits would be offset by a lower rate on time deposits; that the losses for the period 1922–32, estimated as indicated in the footnote to Table I, are reasonable for the period; and that the reported data on net additions to profits are reliable. These assumptions do not seem unreasonable. If the national banking system had assumed the burden of the heavy losses for the period 1918–32, banking would still have proved a highly profitable investment field. Subtracting the losses on deposits from net earnings plus interest on demand deposits, a very satisfactory return on capital equities remains. The average for the period is 20.07 per cent on capital and 9.26 per cent on capital, surplus, and undivided profits. The apparent increase in the rate of return to bank capital over the rates shown in Table II is attributable to the fact that, in every year except 1932, the interest paid on demand deposits exceeded the losses to depositors in the system.

The cost of insuring deposits in banks other than national would have been somewhat greater than the cost of similar protection for National Banks. The increased cost is largely due to the lack of adequate supervision of such banks and to the relatively large number of small institutions.[6] This experience has no direct bearing on the operation of the insurance plan for national banks, but a record of the state banks is summarized in Table III. The losses involved in failure were estimated at 40 per cent of the deposits. While this figure is high for some states and low for others, it is probably reasonable for the entire period studied, since it allows for an average shrinkage of over 50 per cent in bank

[5] *Ibid.*

[6] See report of Committee on Economic Policies, Kansas Bankers Association, Topeka, Kansas.

assets. No reasonably complete data are available on earnings for state and other banks not in the national system; consequently no analysis of such material was possible.

While losses by decades prior to 1930 for banks other than national exceeded 1/10 of 1 per cent, they still remain within the realm of insurance possibilities. A premium of 1/4 of 1 per cent without interest would have paid all losses through 1932 and would have

TABLE III

RATIO OF LOSSES TO DEPOSITS AND INSURANCE FUND
BANKS OTHER THAN NATIONAL*

Periods	(1) Average Total Deposits (in 000's)	(2) Average Losses to Depositors† (in 000's)	(3) Ratio of Col. (1) and Col. (2)	(4) Ins. Fund‡ (in 000's)	(5) Ins. Fund with Interest (in 000's)
1863–69	147,464	124	0.00084	1,720	1,992
1870–79	753,550	3,463	0.00459	13,908§	15,249§
1880–89	1,701,632	1,560	0.00091	12,306	8,146
1890–99	3,256,563	5,324	0.00163	40,474	40,242
1900–1909	7,439,416	13,821	0.00185	88,253	111,031
1910–19	14,347,149	6,568	0.00045	381,252	473,833
1920–29	30,210,302	45,201	0.00149	684,475	958,542
1930	36,578,311	98,512	0.00269	677,409	977,277
1931	34,666,504	295,266	0.00851	468,809	789,137
1932	27,929,351	458,798	0.01642	79,843	413,376

* Reports of the Comptroller of the Currency 1931 and 1932.

† Losses taken as 40 per cent of deposits involved in failure. No deduction for deposits of reopened banks prior to 1921.

‡ Assuming an annual premium of 1/4 of 1 per cent of deposits. Status of fund at the end of periods.

§ Deficit.

left a surplus of over 79 million dollars. This premium would, however, have failed to cover losses in 17 years. The insurance fund would have shown a deficit from 1873 to 1887. The maximum deficit approximately 14½ million dollars, would have occurred in 1878. The fund would have reached its height of 684 million dollars in 1929. If interest at 3 per cent had been allowed on unexpended balances, the number of years in which the fund would have shown a deficit would have been reduced to 14, but the maximum deficiency would have been increased to over 15 million dollars. The maximum surplus, however, would have

jumped to 977 million dollars, and the balance in the fund after 1932 losses would have been in excess of 413 million dollars.

In considering the above statistics the question arises concerning the possible effect of deposit insurance on bank failures and losses. Obviously, if deposit insurance tends to increase failures or losses, the records shown above can hardly be considered significant. The weight of informed opinion on this subject is discouraging. The majority of bankers and economists seem to feel that deposit insurance encourages careless banking and leads to a greater number of failures. This argument is expressed by Professor Kemmerer, who believes that a deposit guarantee system will cause deposits to be placed in banks having the most "liberal" loan policies. "This means," he says, "competition among banks in slackness in the granting of loans. The bank with the loose credit policy gets the business and the bank with the careful, cautious credit policy loses it."[7] Liberal credit policies, however, have always been competitive weapons, yet bankers have found that a conservative policy pays in the long run. The reckless banker, far from forcing other bankers to conform to his standards, succeeds only in placing his bank in the hands of receivers. Furthermore, depositors who are also bank borrowers are less affected by deposit insurance than are any other group. This is particularly true if only partial protection is given large depositors. Their ability to offset their deposits against their loans in the event of bank failure places them in a preferred position as creditors. Consequently, it seems doubtful if deposit insurance would have the far-reaching and dire effects suggested.

In support of the assertion that failures increase as a result of deposit insurance, it is argued that bankers, relieved of their responsibility to depositors, are likely to take additional risks. It seems clear, however, that management's first responsibility is to the stockholders who lose through indifferent banking practices whether or not a deposit insurance plan is in force. The possibility of losing owners' capital is, without doubt, the strongest

[7] E. W. Kemmerer, Address delivered before the Savings Bank Association of Massachusetts, September 14, 1933. As quoted in the *Guaranty of Bank Deposits*, Association of Reserve City Bankers, Chicago, 1933.

force in operation to prevent unsound banking. Ambitious advocates of deposit insurance believe that the plan would operate to increase bank earnings in periods of depression since, with the danger of runs removed, banks would not need to keep in so liquid a position. Commenting on this argument Guy Emerson says: "This appears to confirm the fears of those who maintain that deposit guaranty will encourage lax banking methods instead of better ones. For commercial banks of the country to adopt less liquid forms of investment is a definitely backward step."[8] His argument is not entirely satisfying. Since runs on banks seem rather remote contingencies in normal times, it is extremely doubtful that deposit insurance would influence the investment policies of banks under these conditions. During depression, however, constant fear of runs exerts a tremendous pressure on the banker to contract credit. Surely Mr. Emerson would not argue that contraction of credit for such reasons is socially desirable, or that a legislative measure which removes the necessity for greater liquidity encourages lax banking methods.

Had the insurance of bank deposits been in effect in 1931, it is doubtful if banks would have felt constrained to carry contraction of credit to such extremes. At that time it seemed to be the desire of a substantial number of bankers to retire temporarily from the banking business through conversion of their assets into cash and government securities. The transference of assets into low-yielding investments and cash finally resulted in huge operating losses to the banks. More important, however, it accelerated the movement of prices downward, reduced the dollar value of assets held as security against loans, threatened the earning power of bank borrowers, and thus endangered the soundness of the banks themselves.

In the face of the overwhelming consensus of opinion to the contrary, it would take a brave person to assert that deposit insurance would not have operated to increase bank failures. Yet it is hoped that enough has been said to indicate that the question is at least debatable. If deposit insurance had not operated to in-

[8] Guy Emerson, *Quarterly Journal of Economics*, Vol. XLVIII, No. 2 (February, 1934), p. 239.

crease bank losses, it is evident that the cost of insuring all bank deposits in full would not have been excessive nor would it have made inroads into bank earnings sufficiently large to have driven capital out of the banking field. While the small premium applied in this study would not have accumulated a sufficiently large fund to care for the tremendous losses of 1933, the deficit would have been small. The huge losses estimated for the period, however, probably would not have brought about the collapse of the system. The government has shown a willingness through the Reconstruction Finance Corporation to protect banks; surely it could have extended the needed aid to protect depositors. If it is at all possible to project the trend of losses of national banks, it is clear that the fears of the banking community that deposit insurance costs will prove exorbitant are groundless.

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PRICE FLUCTUATIONS AND THE GOLD SUPPLY

THERE is a certain school of economists who maintain that the chief influence affecting the level of commodity prices is the value of gold; that changes in the value of gold, caused either by changes in the demand for it or the supply of it, have been directly responsible for the long up-and-down swings shown by the accepted indexes of commodity prices; and that the level of commodity prices can positively be controlled by increasing or decreasing the quantity of gold or even by dividing the existing quantity into more or fewer monetary units. This school may be called the monetary Marcionites, for, like the religious sect of that name, they take the god of the orthodox (i.e., gold) and set it up as the devil, and as the devil they attribute to it much more power than the orthodox ever claimed for it as a god.

These economists concentrate on the factors M, P, and T, in the well-known Fisher equation ($MV+M'V'=PT$). They even interpret M as gold money alone, and leave out entirely M' and V' and all forms of M except gold, and make little if any allowance for V. In fact, Professor Warren's formula simplifies the method still further by ignoring all of T except the production of basic commodities, and by making no allowance either for changing rates of turnover of goods or for payments for services. His formula may be thus expressed: $\frac{m}{t}=P$. Yet we know that payments involving bank credit have been many times more important than payments in currency in this country; we know that the ratio of bank deposits to reserves varies greatly, so that a given amount of bank reserves may support either a very high or a very low level of credit; we know that the volume of currency has not fluctuated in accordance with the volume of gold; we know that trade in basic commodities has been a constantly decreasing part of our total national trade; we know that prices of other commodities have not corresponded closely in their move-

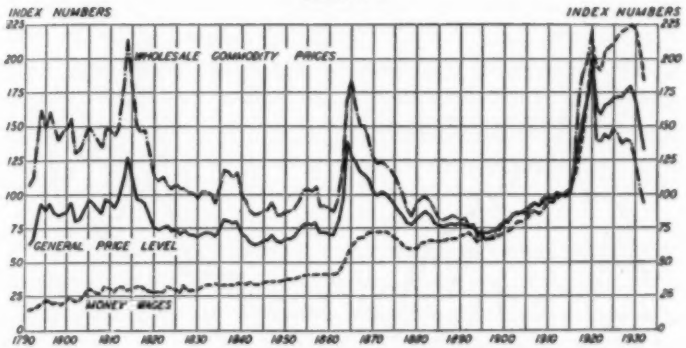
ments to prices of basic commodities; and we know that wages especially have differed enormously from wholesale commodities, both in their long trends and in their minor fluctuations; and finally, we know that V' (the velocity of circulation of bank deposits) fluctuates more widely than any other factor in the equation of exchange. Consequently, if Professor Fisher's formula is correct Professor Warren's formula cannot be correct, since it leaves out the most important variables.

Professor Warren thinks he has proved that gold, divided by production, equals prices. He has assembled with great assiduity a mass of statistics proving conclusively that the ratio of gold to production has very little to do with prices—that that ratio has no effect on prices year by year, or in two-year periods, or any period less than five years. A slight connection between his ratio and the long swings of the wholesale prices of basic commodities may exist, although it is not proved, and in view of the circumstances is very unlikely. There are other more reasonable explanations for the long swings of the wholesale price indexes, the most important being variations in the costs of production and transportation of basic commodities and in the demand for them, as compared with the demand for other commodities and services. The long periods of falling wholesale prices were characterized by peace and by the construction of canals, turnpikes, railroads, and steamships, the opening up of new countries, the invention of new agricultural and industrial machinery. The periods of rising prices were characterized either by war or by excessive speculation, the test of excess being that every such period was followed by an epidemic of bank failures and the suspension of specie payments, by all or nearly all of the banks of the country.

In any case the available indexes of wholesale commodity prices are very poor measures of the general price level. It is obvious that if gold determines the price level it should affect all kinds of prices and not only the wholesale price of foodstuffs and raw materials which form the backbone or indeed the whole skeleton of all wholesale commodity price indexes. Other prices might lag somewhat; but, if gold is the villain of the piece, they should all ultimately respond to the crack of his whip. Actually they have

done nothing of the sort. In their long-term movements, wages and bonds have constantly shown trends very different from those of wholesale commodities. Perhaps bonds should be omitted from consideration, although it is reasonable to suppose that other forms of fixed capital have moved similarly to bonds. But no study of price levels is worth while if it leaves out wages—the price of the most important commodity in the world. The great contrast between the price of labor and the prices of raw materials is shown by a comparison of the top and bottom lines on Chart I.

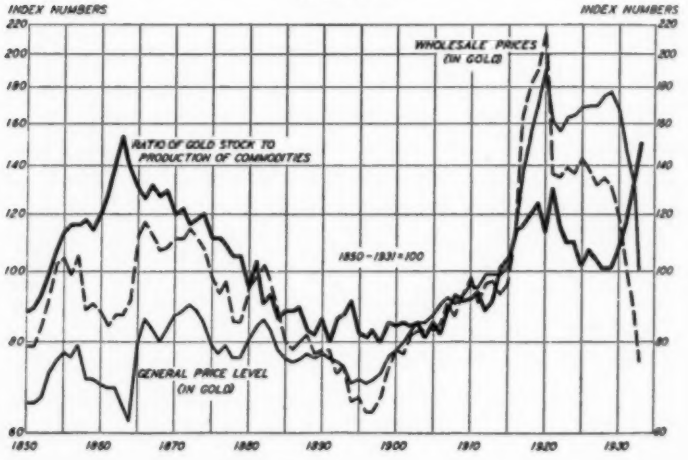
CHART I



In order to test the adequacy of a monetary medium or the relation between the price level and the supply of money, it is necessary to use an index of prices that includes all of the things bought with money. On Chart I we have made an attempt at such an index. The figures after 1860 have been compiled by Carl Snyder, those before that date by myself. We have included wholesale prices, retail prices, wages, and, with smaller weights, stocks, bonds, real estate, and rents. The proper weights to be used are, of course, a matter for reasonable difference of opinion; but, even with the greatest change in weighting that could reasonably be made, the index would differ very greatly from any index of wholesale prices of commodities and would be a much more accurate measure of the purchasing power of money. This index is also shown on Chart II, from 1850 to date, for a comparison with a curve representing the ratio of gold stock to physical

production of commodities. On this chart prices have been converted into gold dollars. The absolute lack of conformity between Professor Warren's gold-production ratio and the actual movement of the general level of prices is too plain to require comment. This chart also shows Professor Warren's index of commodity prices reduced to its own average for 1850–1931. Although there is more resemblance between this curve and the curve showing the gold ratio, during 50 of these 82 years the curves are wide

CHART II



apart and the movements from year to year are more often opposite than similar in direction. Observe that in 1920 the actual price was 80 per cent above the theoretical price, in 1863 it was 35 per cent below, and in 1932, 50 per cent below.

Let us consider more closely the period 1880–1915. Concerning this period Professor Warren says: "For the thirty-five years before the World War prices (in the United States) rose if the world's monetary stocks of gold increased faster than the production of other things, and fell if gold increased less rapidly" (*Prices*, p. 83).

In 19 of those 35 years the world-stock of gold, according to Professor Warren's own figures, rose faster than the physical vol-

ume of production; in 8 of those 19 years prices rose, in 9 they fell, and in 2 remained unchanged. Stocks of gold rose more slowly than the physical volume of production fourteen times. In eleven cases prices rose, absolutely contrary to Professor Warren's theory; in only two cases they fell and in one remained unchanged. In the 2 years in which Professor Warren's theory called for stable prices, prices were not stable. In the whole 35-year period Professor Warren's theory was supported by the facts only ten times; it was flatly contradicted twenty times, and failed to operate five times.

Professor Warren also stated his theory in a slightly different form: "For the 30-year period 1885 to 1914, monetary stocks of gold in the United States had to increase at the same rate as the physical volume of production in the United States in order to maintain stable commodity prices. If gold stocks increased more rapidly than the production of other things, prices rose; if gold increased less rapidly, prices fell" (*ibid.*, p. 84).

This statement is not justified by his statistics. In the 30 years under discussion, gold stocks rose more rapidly than production seventeen times. In 9 of those years commodity prices rose; in 7 they fell, and in 1 they remained unchanged. On the other hand, gold stocks rose less rapidly than the physical volume of production thirteen times, and prices fell in only three of those years. They rose in 8 and remained unchanged in 2 years. The proportion of years of rising prices to years of falling prices was greater when the gold stock rose less than the physical volume of production, than in the years when the gold stock rose more than the physical volume of production. Professor Warren's theory was borne out by the facts in only 12 of the 30 years; was contradicted by the facts in 15, and failed of confirmation in the remaining 3. This 30-year period is the only period in history which appears to support his theory, even when drawn on a small-scale chart in such a way and with such a choice of base as to give that theory the best possible chance.

Professor Warren's theory concerning the movement of prices in England is equally inconsistent with the historical record. He states that: "For 75 years before the World War, world monetary

stocks of gold had to increase at the same rate as the world physical volume of production in order to maintain commodity prices in England. If gold stocks increased more rapidly than other things prices rose. If they increased less rapidly prices fell" (*ibid.*, p. 80). Actually in 37 of those 75 years world-monetary stocks of gold increased more rapidly than the world-physical volume of production. But in 17 of those years prices fell, and they rose in only 16, remaining stable in 4. In 30 of the 75 years world-gold stocks increased less rapidly than the physical volume of production, and according to Professor Warren prices should have fallen. They actually rose in 15 years and fell in only 14, remaining unchanged in 1. In 8 years gold stocks and physical volume of production rose at the same rate. In only 2 of these years did prices remain unchanged. The number of years in which prices conformed to Professor Warren's theory was 32. The years in which prices moved contrary to his theory numbered 38, and in 5 years they failed to move when his theory said that they should. Of course, if the theory had no truth in it at all the number of the years conforming would have been, according to the laws of chance, about $37\frac{1}{2}$. And, if the theory had any real significance, the number of years conforming would have been at least 45.

It may be said in criticism of these figures that it is only reasonable to allow a lag in the movement of prices. I have therefore also studied the movement of prices in the year following changes in the ratio of gold stocks to volume of production, with results equally unfavorable to Professor Warren's theory. I have also compared the price averages in the year following a change in the ratio of gold to production with the price averages in the year preceding such change, thereby allowing 2 years for the effect, if any, to become manifest. The figures analyzed in this way still contradict Professor Warren's theory.

If the ratio of gold stocks to the physical volume of production of other commodities has any effect on prices at all, it obviously must affect the prices of the goods then in existence or then being produced, not the prices of goods produced several years later. We are not speaking now of the annual production of gold, which

might increase or decrease for several years before having a perceptible effect on the gold stock, but of the gold stock itself. Most basic goods are produced, sold, paid for, and withdrawn from the market inside of 2 years. Although stocks of gold are cumulative by nature, stocks of other commodities are not. Consequently, this theory is wholly inapplicable to longer periods—the so-called broad movements and trends. As it is not supported by the evidence concerning price movements year by year or over periods of 2 years it has no claim to consideration. It is absurd to try to justify it by what may have happened to prices 5, 10, or 13 years later, since so many other fully adequate explanations are available to explain those movements. Moreover, if any attempt is going to be made to manage the currency, it would be absurd to adopt a device which, according to past experience, could not be expected to work in less than a period of years, especially when the extent of the reaction following each application of the device cannot possibly be known in advance.

There is another theory which is stated by Professor Warren but had previously been stated in less extreme form by Professor Cassel and Mr. Kitchin. This is based on the amount of increase in the gold stocks of the world in proportion to the existing gold stocks. Most of the partisans of this theory have stated that in order to keep commodity prices stable, it has been necessary for gold stocks to increase on an average of 3 per cent per year. Professor Warren says that the annual production must equal 5.6 per cent of the monetary gold stock. The studies of Professor Cassel and Mr. Kitchin were based on the Sauerbeck-Statist index, which is notoriously unreliable. The fallacies of their theories have been amply exposed by Mr. Mlynarski[1] and Mr. Phinney.[2] As for Professor Warren's statement of this theory, we find that during the years when the United States was actually on the gold standard, beginning in 1834, there were 51 years in which the gold production was less than 5.6 per cent of the gold stock at the end of the preceding year. In 23 of those years prices rose and in

[1] F. Mlynarski, *The Functioning of the Gold Standard*, Geneva, 1931, pp. 32–48.

[2] J. T. Phinney, "Gold Production and the Price Level," *Quar. Jour. Econ.*, August, 1933.

2 they remained unchanged. This shows only a chance relationship between gold production and prices. Taking prices for the next succeeding year, i.e., allowing a lag of 1 year, we find that in 21 years they rose, in 4 they remained unchanged, and in 24 they fell. His theory, like all of his other theories, worked in less than one-half the cases. In other words, they were less reliable as explanations or forecasts of price movements than tossing pennies or throwing dice would have been.

In view of the fact that for several generations business has been more largely financed by means of credit than by means of currency, and that currency has consisted of other things besides gold, it is not surprising to find that there has been no connection between changes in the quantity of gold and changes in the price level. The belief that there has been such a connection is largely based on the fact that during the decade following the discovery of gold in California there was a rise in commodity prices in all of the important countries of the world. There are strong reasons for doubting whether that rise was to any great extent caused by the gold discoveries except indirectly in the sense that the search for gold promoted colonization and opened up new areas for settlement, increased the demand for the kind of equipment required by settlers, and increased speculation based on the anticipated future growth of those settlements. In the first place the rise in prices began 6 years before the gold discovery, the low point being 1843. Second, the rise was only slightly greater than the rise in the 1830's when no important gold discoveries were made. Third, the rise occurred mainly while the Crimean War was going on and mainly in commodities whose prices naturally would have risen because of war demands (farm products, food, leather products, spirits), both because of the demand for munitions and the blockade of Russian ports. Fourth, while the amount of specie in circulation in the United States doubled, the combined amount of bank notes and deposits rose even more, and these were much greater in volume than specie, and in all probability had a greater velocity. Of course bank credit could have expanded considerably without any increase in the gold stocks, if the demand for goods was such as to stimulate business or speculative borrowing. That

was what happened in the 1830's, both here and abroad. Mr. J. T. Phinney has shown that the situation in England in the 1850's was similar to that here—an increase in bank credit out of proportion to the increase in gold stocks. While the American banks' notes and deposits rose 111 per cent, their specie reserves rose only 34 per cent, with the result that all of the banks in this country were forced to suspend payments in 1857, and even the Bank of England had to request the government to allow it to issue notes without a gold backing. The overexpansion of bank credit was obviously much more responsible for the rising prices than the increase in gold. Fifth, if the gain in commodity prices was due to an increase in the gold supply, it seems strange that nearly all of it disappeared, both here and in England, by 1858, although the gold output continued at a rate higher than ever known before. And finally, the high point in commodity prices was reached in 1856 in France, in 1866 in this country (referring to prices in terms of gold), but not until 1873 in England and Germany, although the high point of gold production was in 1853.

The recovery in commodity prices after 1896 has also been attributed to increased gold production. According to the universally accepted statistics, the low point of gold production was in 1883, and production was large and increased rapidly from 1890 on. The Johannesburg gold rush occurred in 1886. The amount of bank deposits per dollar of gold in this country increased rapidly after 1898, while the volume of bank notes (which were not based on gold) trebled before 1913. There was a vast development of speculation in securities, leading to the crisis of 1907, when the banks were compelled to use clearing-house certificates instead of cash because their cash reserves were below the legal minimum. The years after 1897 were full of wars, threats of war, and preparation for war on a larger scale than ever before known; and this involved a great deal of government borrowing. It also involved the withdrawal of millions of men from productive occupations, whether to fight or to prepare for fighting, and the diversion of vast quantities of material to destructive purposes. It is extremely likely that a considerable rise in prices would have occurred at that time even if gold production had not increased.

Of course, any study of the relation between gold and the price level cannot leave out of consideration the fact that before 1871 the only country on a single gold standard was England, while between 1871 and 1900 all of the important countries adopted the gold standard. Consequently, if there was any causal relationship between the supply of money metal and the price level, the supply of money metal to be considered must include silver as well as gold. A large part of the gold production from 1850 to 1900 merely replaced silver as money. The total supply of money metal did not, therefore, increase as rapidly as one would suppose from merely observing the ratio of gold production to gold stock.

I do not wish to be understood as maintaining that there is no possible logical connection between the supply of gold and the general price level, but I do wish to emphasize these points: (1) the effect of changes in gold production on wholesale commodity prices, if any, has been very slow, uneven, unpredictable, and out of proportion; (2) the effect on other prices has been even less—in fact it has been so slight as not to be at all recognizable in the statistics of wages or security prices and only very slightly and doubtfully in the cost of living; (3) no reasonable inferences can be drawn from the movement of wholesale commodity prices between 1850 and 1915 as to the amount of gold production necessary to maintain a given price level or the effect of a given amount of gold production on prices for the following reasons: (*a*) the greater part of the world was not on the gold standard in most of that period; (*b*) bank credit had much more influence on prices than gold or currency; and (*c*) the available price indexes are very poor indicators of the general price level.

So far we have been discussing changes in the quantity of gold and the alleged effect on prices. Now let us take up an entirely different matter, i.e., changes in the price of gold.

I believe that except for this Administration's experiment there has never been an instance of raising the price of gold or debasing the currency in order to raise commodity prices. It has usually been done secretly as a means of stealing some of the people's wealth for the use of a needy or unscrupulous monarch. There have been no cases in modern history of a legal change in the

price of gold while gold coins of the old legal value were actually lawfully in circulation, except what happened in 1834 and 1837 in this country, if indeed those were exceptions. In 1834 we were on the bimetallic standard, with silver overvalued and practically no gold or silver dollars actually circulating. The price of gold was raised from $19.39 to $20.69 by changing the content of the dollar. This was practically a 6 per cent increase as measured in grains of gold, but because our currency was really on a silver base at the time it is more nearly correct to measure the change in terms of the market prices of gold and silver, or in terms of exchange rates. So measured, it really amounted to only about 3 per cent. This action was not taken with the object of raising prices, and I believe that no contemporary has left any record of his belief that it was responsible for the rise in commodity prices that immediately followed. Nevertheless, the Warren index shows a rise of 47 per cent in wholesale prices between the date of this act, June, 1834, and February, 1837—a truly remarkable result, if result it was. But then an even more remarkable thing occurred. In January, 1837, the price of gold was reduced two cents (from $20.69 to $20.67) per ounce, or one-tenth of 1 per cent, and immediately commodity prices started to fall and fell 43 per cent in 6 years. (Incidentally I believe that this was only the second case in history of a gold coin being increased in weight. Revaluation has usually been a one-way process.) It would be absurd to attribute this decline in prices to the changing of the gold content of the dollar. We know that the boom of 1834–37 and the decline of 1837–43 were due to speculation and bad banking, and that the change in the price of gold had certainly very little and probably nothing to do with it. Similar commodity price changes took place in England and France without any changes in the price of gold or silver.

When the various European countries revalued their gold currency after the war, in every case the old gold currency was both legally and actually out of circulation and the new value attributed to gold was an approximation to its actual market value, which in most cases had to be figured on the basis of the dollar exchange rate. In no case was it the desire of the devaluating

governments to cause a rise in commodity prices. On the contrary, it was their hope that by this means they might stop the rise that was then going on.

In no case did prices rise after legal or *de facto* devaluation any faster than they were rising in countries that had not devalued, except in Poland, on her second devaluation, and in Bulgaria. The high price levels in all of those countries were attained by inflation without reference to the price of gold, and while the governments were either not doing anything to the price of gold or were trying to keep it down.

Take now the countries that abandoned the gold standard in 1929 and subsequent years, and have not officially devalued their currencies. In some of them gold is freely bought and sold at open-market prices considerably above the old official value. In some the central bank or the government has been buying gold at its high market price. In no one of them has the commodity index risen as far as the price of gold, even by comparison with falling price averages in gold standard countries, except in Chile, where the enormous increases in the prices of imported goods have caused the official average of all commodities to rise slightly more than gold although domestic products have not done so. Putting it another way, commodity prices in those countries, if expressed in gold equivalents, declined much more rapidly than in countries remaining on the gold standard, whereas, according to the theory of price determination on which the doctrine of gold manipulation is based, the commodity averages, if converted to gold equivalents, should either have remained stable or should have corresponded in their movements to prices in countries still on the gold standard. In many countries, after abandonment of the gold standard, prices fell even in their own depreciated currencies; and in all for which I have been able to find or construct indexes the prices of domestic products fell more rapidly than the prices of imports or rose less rapidly measured in their own currency, with the single exception of South Africa, where the chief industry is gold-mining.

A closer analysis of the price statistics brings out some very important and little-known facts, and demonstrates not only that

the indexes of wholesale commodity prices are very poor indications of the purchasing power of money, but also that rapidly rising wholesale prices are more likely to be injurious than helpful to a nation. In all of the cases of inflation or currency depreciation that I have ever come across, it has been apparent that the wrong prices rose most rapidly and farthest. Prices of imports regularly rose ahead of exports and other domestic prices. Of course, prices of raw materials rose faster than those of manufactured goods. In many cases, however, agricultural products have lagged behind and have even fallen for a time after inflation began. Retail prices have, of course, always lagged behind wholesale prices, and wages have been slower still to rise. Inflation and currency debasement have been very effective in raising prices of articles that citizens have to buy, but much less effective in raising prices of what they have to sell. That is probably the reason why generations that have experienced the blessings of inflation have always been so bitterly opposed to repeating the experience. It explains why after our dollar was allowed to drop to 35 cents in 1864 the nation struggled through 15 years to get it back to par. It explains, also, perhaps, why Dante many centuries ago declared that there was a special place reserved in Hell for monarchs who debased the currency.

It is being more widely recognized by economists that a decline in wholesale commodity prices is desirable if the decline is not more rapid than that in the cost of production. That is the most effective way in which the benefits of technological advances can be diffused among the people. History shows that the long periods of declining commodity prices have been periods in which the real wages of workingmen have increased most rapidly, not only here but in England and Sweden. The English figures are especially interesting, since they allow for unemployment. The necessary figures to make such an allowance are unobtainable in this country, but there is no doubt that even if they were they would not materially alter the picture. These periods of declining commodity prices were also periods in which the population and the per capita production of basic commodities and the volume of foreign trade increased the most rapidly both in this coun-

try and in the world at large. They were periods in which budget surpluses greatly outnumbered budget deficits and in which the federal debt was drastically reduced. The long 25- or 30-year downswings shown by wholesale price indexes—the swings that might possibly be connected with changes in the gold supply—have been helpful, not harmful, to the people as a whole. While wholesale commodity prices were falling, wages (both real wages and money wages) were rising, and the cost of living was fairly stable.

On the other hand, the short, sharp upswings and downswings that characterize business booms and depressions have been very harmful. They have plainly had nothing to do with the *supply* of gold or the *price* of gold. If the *demand* for gold is measured by volume of business activity (and I do not know any better way to measure it) then those short swings have not been affected by the demand for gold. They have primarily been caused by excessive expansion and contraction of credit, especially bank credit.

The object of a good currency and credit system should be to permit prices of commodities to decline step by step with technological advances in productive efficiency, thereby permitting real wages to rise, while avoiding the interruptions of booms and depressions. This is obviously more of a credit problem than a currency problem. I believe that the permanent assurance of a reasonable degree of price stability requires: (1) a banking system that will not permit excessive speculation; (2) a balanced national budget; and (3) permanent peace. Without these conditions no monetary system can work well for long periods. With them the old-fashioned gold standard will, in my opinion, work as well as any other that has been proposed and much better than most.

RUFUS S. TUCKER

BROOKINGS INSTITUTION

THE THEORY OF MONOPOLISTIC COMPETITION

CHAMBERLIN'S *Theory of Monopolistic Competition*[1] deserves to rank as one of the major contributions to the theory of value and distribution in recent years. Holding constant most of the other assumptions of neo-classical economics that have been especially subjected to criticism of late, he proceeds to vary the assumption that each market approximates either perfect competition or absolute monopoly. He postulates an imperfectly competitive market consisting of a number of smaller markets, each being characterized by a seller's monopoly imperfectly isolated from the others. He studies this imperfect market (which we will designate the genus market) through one of the constituent (species) markets and through two demand curves for it, which we will call the species curve and the average genus curve. The species demand curve represents changes in the purchases of a species when the price of that species alone is varied. The average genus demand curve represents changes in the purchases of a species when the prices of all other species in the genus also vary so as to remain "identical"[2] with that of the species under consideration. The extent of divergence of these two demand curves is a reflection of the effectiveness of competition, perfect competition appearing as a limiting case in which the species demand curve is horizontal. In the other limiting case, absolute monopoly so far as the genus under consideration is concerned, the two curves coincide.[3] When selling costs are introduced, two types of cost curves are found necessary, too, analogous to the two demand curves. Thus for a given price, the species selling-cost-per-unit curve assumes the selling costs of the competing monopolies constant;

[1] Edward Chamberlin, *The Theory of Monopolistic Competition* (Cambridge: Harvard University Press, 1933). Pp. x+213. $2.50.

[2] Chamberlin does not investigate what he means by "identical." If his theory is to be broad enough to include the case where the different species represent, e.g., different but competing freight hauls, "identical" appears to be the wrong word.

[3] In addition to offering us a generalized theory under which both perfect (price) competition and absolute monopoly are subsumed as limiting cases, Chamberlin's analysis implies that logically neo-classical theory should include a theory of pure quality competition, which by analogy to the conventional treatment of pure price competition in the "law of supply and demand" might lead to a "law of single quality."

the average genus selling-cost-per-unit curve assumes the same sales cost by each seller in the genus market.

The (reviewer's) words, "genus" and "species," suggest quality differences in the good dealt in. Chamberlin's theory is intended to embrace geographical differences and differences in terms of sale as well. Most of his theory, except the appendix on pure spatial competition, proceeds on the assumption that each species competes equally closely with every other, but he deals briefly with the case of near and remote competitors under the caption of "oligopoly." In the reviewer's opinion this case is the rule, and merits more extended treatment.

While Chamberlin has by no means exhausted the possibilities of varying the assumption regarding monopoly and competition, his conclusions are instructive. " . . . . Under conditions of pure competition there would be no selling costs. . . . . Wherever selling costs are incurred—and they are incurred in some measure for almost all commodities—to cast the price problem in terms of 'competitive' demand and cost curves is not merely inaccurate; it is impossible" (p. 174). ". . . . The curve of selling costs which is superimposed on the curve of production costs must be a rectangular hyperbola distributing over different volumes of product the fixed total of selling costs which defines the demand curve. It is *not* a curve showing the costs of producing and selling different volumes of product. No single demand curve would be valid for this latter type of cost curve, for the position of the demand curve shifts with each alteration in total selling expenditure" (p. 175). ". . . . The theory of pure competition understates both price and cost, first by understating production costs, and secondly, by omitting selling costs altogether" (p. 175). "The conclusion that pure competition represents the scale of production as too large . . . . is highly probable" (p. 176). This last statement calls for comment below.

Under the usual neo-classical assumptions including perfect competition, each enterpriser pursuing his own maximum profit (and each consumer-laborer-saver pursuing his own maximum utility) so acts as to maximize the physical volume of national income. Clearly Chamberlin's modification of neo-classical assumptions introduces one important—though not the only important—qualification on the validity of this view that private profit is a good index of public policy. He offers us a theory the implications of which definitely depart from laissez faire and move toward what is variously called "social control," "public regulation," "economic planning."

Admittedly, "The theory of monopolistic competition has not been carried in this study beyond its beginnings" (p. 176). Chamberlin mentions the implications for the theory of distribution. It may be in order to list some other implications which he has not followed out and which would require amendments in some of his statements.

(1) Economic theory has recognized but seldom explored the concept of a buyer's monopoly. Had Chamberlin not followed this precedent in elaborating his theory of competing monopolies,[4] he might have been led to explore a market in which there is competition both among buyers and sellers, and yet in which each buyer as well as each seller enjoys some monopoly advantages. If his picture of a market is more realistic than the absolute monopoly or perfect competition of the texts, this further step should take us still further in the direction of realism. And it offers us an explanation of what is commonly recognized but cannot be adequately explained by the theory of perfect competition—differences of bargaining power as between buyer and seller. Moreover, had Chamberlin applied his theory to both sides of the market, his analysis would not have been so narrowly limited to the consumer (and investor); it would have considered the laborer, the farmer, and the borrower as well.

(2) Neo-classical competitive theory affords no satisfactory basis for distinguishing "plant" from "enterprise," hence neo-classicists have often failed to distinguish them. Chamberlin has a real place for sales effort in his theory, and hence *a* basis for explaining the existence of an enterprise that embraces more than one plant. Yet, curiously enough, he fails to make the distinction between plant and enterprise. This confusion is embodied in the words "scale of production" in the quotation from page 176 cited above. If an enterprise includes a number of plants, it is possible but not "highly probable" that the equilibrium scale of production for a plant will be less than the scale for which unit production cost is a minimum. And it is very unlikely that the equilibrium scale of production for the enterprise will be less than under the hypothetical conditions of perfect competition where plant and enterprise coincide. Under appropriate conditions (including unit sales cost at a minimum with a small volume of output as in the diagram on page 138) plant and enterprise will coincide and his conclusion (p. 176) appears to hold.

Failure to reckon with a unit of business organization other than the

[4] ". . . . The problem of value where buyers are few and sellers are many (as in an unorganized labor market) is not within the scope of this book" (p. 30).

plant appears also in his discussion of oligopoly, where he says, "If no one is advertising, no one may begin, each realizing that his own aggressive policy would affect so adversely each of his competitors that they would be forced to advertise in order to protect themselves, and that in the end all would lose" (p. 170). He does not here suggest as possible alternatives either consolidation or trade association advertising.

(3) Chamberlin elaborates his theory in stages: (*a*) price and sales effort constant, quality varied, (*b*) quality and sales effort constant, price varied, etc. He warns us himself against assuming that this method will yield a complete picture (p. 3) yet he follows it, and hence he offers no theoretical basis for distinguishing product manipulation[5] as a form of sales effort from quality competition as an anticipation of consumer demand.

(4) It is the virtue of Chamberlin's treatment[6] that he offers us a theory not of a single enterprise but of a *market* consisting on one side of competing monopolies. He does not, however, carry the analysis to its final stage—the economic system as a whole.[7] The reviewer suspects that, if it were carried to this final stage, there would be interesting and fundamentally important implications (1) for Say's Law;[8] (2) for the theory of the business cycle; (3) for the theory of the level of prices; (4) for the determinacy of the equilibrium point on the assumptions made.

The theory of monopolistic competition clearly opens new vistas for

[5] The word "product" should be here taken to include the container and the terms of sale.

[6] Contrast Robinson's *Economics of Imperfect Competition*, London, 1933.

[7] In discussing sales effort he says: "In the analysis to follow, we shall not go beyond the adjustments within the single group. It will be evident that a method similar to that applied as between the individuals in one group could be extended to systems of interdependent groups and even to the all-inclusive problem of the whole economic system."

[8] Chamberlin claims to offer an explanation of permanent excess capacity of plants (Chap. v, Sec. 5). The reviewer is still unconvinced that his market theory (as distinguished from a theory for the entire economic system) explains more than a negligible amount of permanent excess capacity. His position seems to imply (1) that the size of the enterprise at equilibrium is less than the most efficient size of plant, and (2) that it will pay the enterprise in the long run to employ a plant of such size that it would be capable of an appreciably larger continuing output without increasing the average production cost per unit.

It should be added, however, that he has explained chronic excess capacity for one factor—entrepreneurship.

what has been called pure, abstract, or deductive economics. But its novelty is necessarily precarious. For most economists have long recognized, in mental compartments separate from what they call "theory," markets with the characteristics on which Chamberlin insists. Thus few students of railroad rate theory have sought to force the market for railroad service either into the perfect monopoly or into the perfect competition category. Hence it should be easy to read Chamberlin's *Theory* (as many appear to have read Clark's *Overhead Costs*) without recognizing its real novelty.

Nonetheless, it may be suggested that Chamberlin offers us in addition to his specific theoretical novelty important light upon the vexed question of the relative merits of induction and deduction. Neo-classical economic theory has often been criticized as being "purely deductive." In the sense in which it is "purely deductive" Chamberlin is "purely deductive" too. But he has changed one of the premises. The real criticism of neo-classical theory implied in characterizing it as "purely deductive" is that it has clung so steadfastly to a single set of premises, never really probing the logical implications of alternative assumptions.

In lesser degree this criticism applies to Chamberlin. Particularly is it to be regretted that he has accepted the usual neo-classical oversimplifications of time relationships.[9] Thus his theory gives no recognition to the competitive relationship between a present monopolistic buyer or seller and his own future self—a relationship particularly important for differences in bargaining power. Again his cost curves are all premised upon the assumption that every cost is *directly* assignable to some accounting period, that there are no overhead costs in Clark's sense. Further, although the convergence between the species and the average genus demand curve may be an adequate measure of resistance to shifting from one species market to another for the neo-classical assumptions as to time (even here to make the species curve approximately a straight line is arbitrary), it fails to take account of the time-shape of such resistance. Thus his two-dimensional diagrams do not show the relation between the cost of establishing and the cost of maintaining a business. And they do not portray the problem of fixing a

[9] "The curve of selling costs has been defined without reference to the period of time and to the distinction between short-time and long-time results" (p. 139). Chamberlin even follows the classical tradition here to the extent of omitting capitalization doctrine.

single price for successive periods in which the demand schedule is expected to vary from one to another. Nor do the curves portray the relative profitableness of such a policy of price maintenance as compared to alternative policies.

All of which is to say that Chamberlin is a pioneer. If he has missed some of the paths that others have found, and if many interesting by-paths have escaped him, he has nevertheless gone far into new and promising territory—much farther than anyone else who has come to the reviewer's attention. And with few exceptions, he has traveled this new territory with an accuracy of thought that has too seldom been equaled even in the well-worn paths of value theory.

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BOOK REVIEWS

The Economics of the Recovery Program. By DOUGLASS V. BROWN, EDWARD CHAMBERLIN, SEYMOUR E. HARRIS, WASSILY W. LEONTIEF, EDWARD S. MASON, JOSEPH A. SCHUMPETER, and OVERTON H. TAYLOR. New York: Whittlesey House; McGraw-Hill Book Co., Inc., 1934. Pp. xii+188. $1.50.

This, as far as I know, is the first attempt by a body of professional economists to give, from a strictly scientific point of view, a statement of the administration's recovery program. Seven Harvard economists who do not speak for the department of economics of Harvard University, but only for themselves, have joined in publishing this highly interesting and stimulating little book. While Schumpeter contributes a general statement on depressions, each of the other six authors discusses one special aspect of the recovery program: Chamberlin writes on "Purchasing Power," Mason on "Controlling Industry," Brown on "Helping Labor," Harris on "Higher Prices," Leontief on "Helping the Farmer," and Taylor on "Economics versus Politics."

The space available does not allow a review of any length of the various essays, although many points are raised which well deserve to be quoted and commented upon. All these essays are, in the best sense of the word, highly scientific. They are written entirely unemotionally and impartially, and obviously without any political bias.

To my knowledge these essays are, so far, the best presentation in a short space of the motives which are supposed to lie behind the recovery program of the administration. They are meant to be an outline of what the administration has probably intended to do, of what it has hoped to achieve, and on what grounds it supposedly has based its arguments; but they are not meant to be a critical judgment of the merits of the recovery program.

The authors know, of course, that an account such as theirs will unavoidably be mingled with criticism. Plenty of it will be found at many places, both openly and "between the lines." Much of it deserves most serious attention; much of it goes a long way in clarifying public opinion and in showing on how little solid ground popular beliefs are often based, and how meaningless and misleading popular slogans

often are. Mr. Chamberlin's discussion on purchasing power and Mr. Leontief's analysis of the crisis in agriculture should, in this connection, be particularly mentioned. But here in the matter of criticism, is the crucial point of such a work.

The book shares all of the advantages, but also some of the disadvantages, of such symposiums. Each author is a specialist in his particular field. He views his subject with the perfect knowledge of an expert who is familiar with all, even the smallest, details of the case. But although he certainly knows as well the broader economic implications involved beyond the particular field he has to cover, he confines himself mostly to a discussion of his special case seen more or less from the special point of view of this particular problem. As far as the book constitutes "a guide to the main ideas underlying the policy of recovery and the main arguments about it" (p. vii), it may have been advisable to split up the recovery program into different sections. But as far as criticism is concerned which, as the authors knew, was unavoidable, the wisdom of such a procedure may be doubted, for, to quote Mr. Leontief (p. 153), "in the face of the close organic interdependence among the different parts of the national economy, the distinctions between the agricultural, industrial and all the other relief measures necessarily bear a mark of artificiality."

While the reviewer bears well in mind that the primary object of this book was not a critical analysis of the recovery program, he has to realize that to a very large extent the essays—in his opinion, necessarily—have developed into much more of a critical than an analytical account of the economic policy of the present administration. And he has asked himself the question whether for such an undertaking the method used is commendable. He is inclined to believe that the objective of the government is much more economic recovery as such than "helping labor," "helping the farmer," etc. While a purely scientific and unbiased account of the various sections of the recovery program is very welcome, criticism of this program should concern the problem of whether the program in its entirety is likely to lead from depression to a genuine recovery. Such a criticism would, of course, have to be based on a well-established theory of the business cycle which alone would allow a judgment of all the different parts of the economic policy of the administration in their bearing upon the ultimate goal of the government. While Schumpeter, in the brilliant Introduction which he has contributed to the symposium, makes it clear, for those who are familiar with his previous work on cyclical economic fluctuations, on

what grounds his skepticism of the program is based, the other authors leave it much more difficult for the reader to recognize that a specific economic theory has guided them in their analysis and in their criticism. Hence it may be rather difficult, particularly for a lay reader, for whom the book seems to be predominantly intended, to form an opinion on the recovery program as a whole from this series of essays on separate problems.

The method applied has made it necessary that some parts of the economic policy of the government are analyzed more fully than others. The reviewer has missed, for instance, a detailed account of the policy which the administration followed in handling the banking crisis in the early months of 1933, as well as one of the securities act, which may be of considerable significance for recovery. He furthermore is inclined to believe that the currency policy of 1933 has had such an extensive bearing on economic recovery that a more detailed discussion might have been advisable.

Finally, one more point may be raised. It is true that the authors are very careful in asserting in the Introduction that it was no part of their plan to suggest measures of remedial policy. However, as they say themselves, it was unavoidable that here and there they would reveal expressly or by implication what they thought could or ought to be done in order to bring about recovery. It therefore might well be asked whether in such a book written by professional economists in a time in which unfortunately so many popularizers offer so many unsound and abstruse plans, the question of what, if anything, could and should be done in times of such a severe emergency should not be expressly posed and an attempt made to answer it. Schumpeter in his Introduction intimates what he personally thinks on this problem, but it would perhaps not have been unwise in a book intended for distribution beyond the profession to include a more detailed statement on this extremely serious problem.

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Economic Tendencies in the United States: Aspects of Pre-War and Post-War Changes. By FREDERICK C. MILLS, with an Introduction by the Committee on Recent Economic Changes. New York: National Bureau of Economic Research, Inc., in co-operation with the Committee on Recent Economic Changes, 1932. Pp. xx+639. $5.00.

This book is a study of economic developments in the United States primarily in the prosperous years between the two depressions of 1920–21 and of 1929. Other special studies of this period are to be made and a summary work is to appear when the depression shall have run its course. For purposes of contrast and comparison two earlier periods, the moderately prosperous one of 1899–1914 and the war years are also surveyed. The immediate objective of this volume is to set up devices for determining economic maladjustment.

The first chapter goes directly into the facts of physical production of the earliest period—1899–1914. It is not preceded by an explanation of the plan to be followed or of the hypotheses to be tested. Although constant reference is made to stresses and strains and to lack of equilibrium, throughout the book, there is no statement or explanation of the sort of equilibrium the reader should have in mind. Neither is there any theoretical analysis to show how unequal rates of growth of different economic elements might produce maladjustments. The author states in his Foreword that he has sought to present methods of handling data, possible ways of viewing them, and methods of contrasting them rather than a constructed, unified account of economic change in any of the periods. The reader must not expect to find and will not find an explanation of the economic collapse of 1929 and the following years.

The data selected for comparison are chiefly relatives of the physical volume of production, prices, capital accumulation, credit, the earnings of labor, costs, the rewards of proprietorship in manufacturing, population, and the like. Manufacturing data are given most space probably because the facts available from the census publications are more ample. Agricultural data is somewhat slight; it is usually treated as a whole instead of being broken down into its constituent parts as is manufacturing. The methods of comparison are chiefly two: (1) trend lines are fitted to the different series and average annual rates of change are computed from trend values; (2) indexes of instability are given for each series. In addition to these measures the relatives of the different series and often the absolute values are set out. This part of the work is admirably done, leaving nothing further to be desired.

Unequal rates of growth are said to require the shifting of labor and capital and these shifts to give rise to maladjustments. Theoretically, this is possible. But it must be remembered that in the period considered, new capital was being accumulated rapidly and there is no proof that the direction of this new fund into the expanding industries did not meet their needs. The shifting of labor is doubtless another matter. But here again we are without quantitative proof that the disequilibrium was serious. Inequality of earnings of the different industrial groups and increasing inequality are likewise not direct evidence of disequilibrium. Only movable capital, labor, and materials are, of course, shiftable, and business men have long ago taken cognizance of the fact that fixed capital and land are not, strictly speaking, cost goods over moderate periods of time. The speedy liquidation and reorganization through which most types of business went following the depression of 1920 (agriculture and coal mining excepted) is evidence of the rapidity with which business can readjust itself to a falling price level and to changes in demand. That it was unable to make a similar adaptation to rapidly changed conditions after 1929 remains to be explained.

Moreover, the instability and the variations in the rates of increase in production which occurred in the 'twenties appear not to have been sufficiently more pronounced than those of the pre-war years to account for the collapse at the close of the later period. That there were elements of instability in that period is fairly obvious, and Professor Mills's masterly summing up in the concluding pages of the volume in which he enumerates the elements of instability and inequality must carry a great deal of conviction. Yet the differences are not striking. The post-war period shows agriculture burdened with debt from which it either could not escape or from which it did not because the farmers were living in hopes of a return of higher prices. This decade also witnessed a boom in urban real estate and in stocks; it saw a rapid mechanization of industry and the increase of durable goods, both for consumption and for use as equipment in production; the distribution of incomes possibly became more unequal but the average level of income rose. There is one final point concerning which there is little statistical evidence in the book, for the good reason that very little is available. This is the ever growing control of prices and output; the emergence of a rigidity in the price structure which was greater than in the early part of the century.

In the final paragraphs of the book Professor Mills says that the

period between the two depressions offers one of the most promising fields of study open to economists. It might be added that at no time in our history have so many current statistical studies been made and at no time has the material for statistical work been so rich. The tragedy is that with all the time and effort lavished upon current information no one, so far as we are aware, was able to foresee the approach of the smashing reversal that came upon us in 1929.

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The French International Accounts, 1880–1913. By HARRY D. WHITE. Cambridge: Harvard University Press, 1933. Pp. xvii+359. $4.00.

This book forms Volume 40 in the well-known series of "Harvard Economic Studies," and was awarded the David A. Wells prize for 1931–32. It consists of "a detailed examination of the French international accounts made with a view to testing and verifying the theory of international trade, especially as regards the mechanism of adjustment."

In the Introduction the author resumes the neo-classical doctrine of the mechanism of adjustment to disturbances of equilibrium in the balance of payments, paying particular attention to the influence of changes in demand schedules as a result of transfers of purchasing power. To this factor he is inclined to allow considerably more weight than are a number of earlier writers. It is rather a pity that his study has followed so closely on the heels of Professor Bertil Ohlin's recently published volume, as one feels that his conclusions might have been appreciably modified by an examination of *Interregional and International Trade*. Your reviewer is sufficiently optimistic to hope that somewhat similar results might have accrued from a perusal of his own slim volume, published in November, 1931.

Part I of the study contains the detailed study of the French international accounts from 1880 to 1913. The statements compiled for these years, even though they avoid the disturbing effects of France's two great wars, are more a tribute to the author's industry and ingenuity than to the reliability and extent of the recorded statistics relating to France's international dealings. Indeed, so bad were the latter during this period that one is continually led to wonder at Mr. White's faith that eventually something could be made of them. A particularly glaring case is that of the valuation of imports and exports

of merchandise. It is suggested that imports were officially undervalued to the extent of about 3 per cent, and exports from 5 to 15 per cent, though not uniformly throughout the period. Mr. White selects 3 per cent for imports and 10 per cent for exports, and then quite frankly (but inaccurately) points out that "the cumulative total of the annual difference in the merchandise balance of trade that results if allowance is made for the probable underestimate mounts to almost 10 billion francs, a sum representing about one fourth of the total net capital exports during that period." Actually, it represents about one-third of the estimated net capital exports during that period, and is sufficient to raise the cumulative "net credit balances on all items" in the balance of payments from 18,766 to 28,365 million francs, a sum rather comfortingly close to the (directly) estimated net capital exports over the period of 30,345 million francs.

The direct estimates of capital exports are themselves hardly more satisfactory to the critical mind, since insufficient evidence is presented to substantiate them. Considerable space is given to establishing the amount of foreign investments in the French portfolio in the opening year of the period. For the other 33 years all the evidence we have is: "They are computed with the aid of the various sources outlined earlier in the chapter, and with that of current financial comments in French economic weeklies and monthlies. The annual estimates have been compared and checked with the numerous sporadic estimates made by various writers. A list of all the estimates relative to French foreign investments that appear to have been more or less independently arrived at will be found in the Appendix." Those who have had any practical experience of the difficulties of making such estimates in this way may be pardoned if they ask for further particulars.

Unfortunately there is a large number of other statistical weaknesses in this section of the book, both in the raw materials with which Mr. White has to contend, and in the methods by which he attempts to bring order out of chaos. He is meticulous in explaining the former, and at times overconfident in his use of the latter. A fair criticism of the estimates in detail would extend to a volume in itself. Suffice it to say, therefore, that they are subject to a very considerably wider margin of error than we have been accustomed to in recent studies; and to call particular attention to the handling of such items as bullion and specie movements, freight charges and tourist expenditures. Perhaps even these are invidious selections.

Part II is analytical in nature, and ably executed. Despite the skill

which Mr. White has brought to bear on this side of the study, it is disappointing that the results are not more conclusive. But even here we are still doubtful of many of the "facts," not only those relating to capital movements, but also those which purport to measure import and export prices. It is not even certain, therefore, that the French experience was as inconclusive as the data submitted would indicate.

In the chapter on the "Mechanism of Adjustment" the author finds "some indication of a causal relationship between capital exports and movements of merchandise, yet it is not marked and in any case there is nothing in the correlations observed which offers proof that the price movements *were caused* by capital exports. Indeed, the lack of correlation noted earlier between gold movements and capital exports casts serious doubt upon the possibility." It may be noted in passing that no adequate examination is made of the movements in purely "domestic" prices as distinct from export prices; nor is the possibility of sectional price movements originating elsewhere than in gold movements adequately considered.

In the two following chapters is given a valuable analysis of French monetary and banking policies and practice. Its value for the special problem under examination is mainly negative. The first chapter rules out the reserve ratios and discount policy of the Bank of France as a connecting link between net gold flows and changes in purchasing power. The second one examines "Paris Market Rates, Bank Portfolios, Quantity of Money in Circulation," and concludes that ". . . . the interrelations of specie flow, bank reserves, discount rates, bank portfolios, and prices yield no conclusive evidence as to the connection between French capital exports and prices." The possibility that merchandise movements themselves were the causal factor behind the exports of capital is also considered, but the evidence is admittedly confused and "supports clearly neither one nor another explanation. . . . . The gold-flow-discount-credit-price sequence of the neo-classical theory appears to have been wholly absent."

Two further chapters are devoted to the "gross" and "net" barter terms of trade. The former is not a very useful concept, and Mr. White's conclusions are fairly obvious. As to net barter terms, the interpretation is more difficult, and complicated by the uncertainties inherent in the statistical data. There is some evidence of a correlation between capital exports and net terms of trade, but it is neither marked nor consistent. The absence of correlation between 1892 and 1898, while it may not weaken, can hardly be said to "strengthen" the orthodox theory, as the author claims (p. 259).

Before summing up the results of his study, Mr. White devotes a couple of chapters to the general economic effects of the French capital exports.

The book is provided with a statistical Appendix, a Bibliography, and an adequate Index. In the body of the text more care might profitably have been given to the arrangement of the tables, and to the arithmetical niceties which make reference from text to table more easy. The charts are numerous and well drawn, but there is a serious error in the legend to Chart 20 on page 236.

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Die bol'ševistischen Gewerkschaften. By WOLDEMAR KOCH. Jena: Gustav Fischer, 1932. Pp. x+480. RM. 22.

The bolshevik revolution was precipitated by the vanguard of the industrial workers not altogether according to prophecy but with a zeal that has helped to sustain it these sixteen years. An abiding question in popular as well as learned circles is whether the workers have improved their position as a result of the change. The question is as idle as it is abiding. Ultimate values are involved which transcend any sort of comparison, and the more worldly issues debatable in terms of floor space, coats, suits, hats, shoes, cannot be settled for sheer lack of data.

Fortunately, only a small part of *Die bol'ševistischen Gewerkschaften* is devoted to the pros and cons of this issue. The rest gives an account of organized labor and its problems in an economy in which the government is the capitalist and a delegated official is boss. The concordance between the problems arising here and under capitalism is surprising, especially to those not accustomed to thinking in fundamental economic terms. Even the differences have their analogues as aberrations under the old order. In the very first flush of the revolution a struggle developed between the "radical" works councils and the "conservative" trade unions which did not differ in spirit from the like struggle that was then going on throughout the industrial world. The issue between trade and industrial organizations was fought out on the basis of small or large organizations. In 1918 all workers were organized into nineteen central organizations, subsequently expanded to thirty-two, then reduced to twenty-one, and in 1931 again expanded to forty-five. A professional leadership has developed in spite of the attempt to prevent it through frequent rotation in office and through flanking a paid

with an unpaid officialdom. At the end of 1927 only one out of fifteen members of the praesidium of the central council of the trade union congress had followed his trade at any time since 1922. Until the upheaval of 1929, which resulted in the removal of Tomski and his followers, the heads of the more powerful of the individual unions had held office since 1919–22. Even the present influence of the communist party in strictly union affairs, which seems to be overwhelming, is not a perversion of nature. The experience of the Western world shows that during impending changes and the subsequent transitions when questions of public policy are in the balance, political interests dominate the thoughts of the workers; under stable conditions administrative problems are controlling. Obviously parties are more suited to the former state of affairs and unions to the latter, justifying no claims of either for divine sanction. Striking is not altogether a lost art; in 1922, 192,000 workers participated in 446 strikes and in 1927, 20,000 in 238 strikes.

An important difference is that the Russian unions are organized at the bottom on the basis of plant rather than locality, and at the top on the basis of central rather than federal authority, that is, the central council of unions exercises full control over the individual industrial unions. The plant organization bears the likeness of a company union both in thought and action. It assumes an identity of interests between itself and the employing state, although it is always ready to take up the cudgels against a stubborn manager. It encourages its members to make suggestions in plant management, and in the interest of "socialist competition" looks with favor on "storm brigades" as a means of increasing output. Since the manager is not responsible to the local union but rather to a trust or combine, the same sort of tension at times develops in regard to these suggestions as in capitalistic countries. For a while managers resorted to the subterfuge of "adopting" instead of "installing" suggestions. According to more recent legislation a suggestion when adopted must also be installed.

Wages, hours, and work conditions for all industries are jointly determined in broad outline by the supreme economic council and its administrative organs, representing the state, and the central council of unions co-operating with the executive committees of the individual unions, representing the workers. The general agreement is then applied to various territorial subdivisions by corresponding representative groups. Finally it is applied to the individual plant through an understanding between the plant management and the local union. But since the unions do not have independent facilities for working

through the immense mass of data involved in the issues before them, they do not meet the state representatives on equal terms. This borders on the predicament of company unions when invited, even in good faith, to participate in discussing these crucial matters. The central council took steps in 1927 to improve its position by adding an economic secretariat to its staff, and in 1929 by ordering its subordinate unions to establish economic bureaus. It is obvious that employee representation must remain futile as long as it is merely formal, whether on capitalistic or socialistic lines.

Fundamentally the same economic problems enter into the determination of wages in Russia as elsewhere—the collective national output, the output of the various industrial branches, the plant output, the individual output, the standard of living. An added complication is a self-imposed pricing system designed to differentiate the values of the various outputs in accordance with a preconceived national purpose. Ultimately it may be possible through a free play in the prices of consumable goods to work back to an equitable price of labor as one factor in production. But one difference is already manifest. Under competition there are short-run wages and long-run wages, or, in technical terms, market wages and normal wages. Normal wages result from a nice balance between the demand for labor and the supply of labor. But in the actual competitive world the balance is not accurately struck. Each employer finds the hiring conditions in terms of labor efficiency, wages, and living standards as given, and not materially alterable by anything he might do. With these as data, he makes his own calculations as to methods, output, etc., always of course with an eye toward profit. The result is the market wage as a chance variation from normal. In Russia the state bulks so large in every transaction that it cannot assume anything as given. The given is itself transformed in every transaction. The normal wage and market wage are therefore telescoped into one. This makes the wage more calculable, but also the penalty of a mistake greater.

The difference between the conceptual and the actual in the Russian scheme and the many shifts between them provide the author with plenty of opportunity to grow cynical, but the treatment throughout is heavily documented in the Russian and German and is by far the best analysis of the subject which has thus far come to hand.

E. B. MITTELMAN

University of Oregon

Great Britain from Adam Smith to the Present Day: An Economic and Social Survey. By C. R. FAY. (3d ed.): New York: Longmans, Green & Co., 1932. Pp. xii+482. $3.20.

The third edition of this now well-known work is a reprint of the first edition, but with two additional sections. The original chapters stand absolutely unaltered: even such obvious slips as Charlestown for Charleston (p. 139), 1794 as the date of Whitney's gin (p. 291), and 1708 as the date of Wedgwood's partnership with Bentley (p. 143) are not corrected, while the statistical tables are not brought beyond 1925. The additions consist of a ten-page survey of "a decade of rationalisation (1922–1932)" and a fourteen-page critical and descriptive account of books on England published since 1928. Both are excellently done in that vivid style which characterizes everything Mr. Fay writes. Rationalization, the fiscal revolution of 1931–32, the Ottawa conference, and the abandonment of gold, all are neatly described, and the summaries of the new books are so incisive that one scarcely need read the volumes. But why was the Index reprinted just as it stood in the first edition? Not a single reference is made to the new material. That just will not do!

By an unhappy oversight the book escaped review in these pages when it first appeared, and is now so well known that no extended description is necessary. Most teachers have kept it at their elbow when dealing with the last 150 years in British history, and many of the new facts it unearths, the thumbnail sketches it contains, and the telling phrases or sentences that jump from its pages have become part of the stock-in-trade of our lectures. The book was written in Canada, and while its author was perhaps chiefly interested in making Britain live and be understood by Toronto students, he came to understand his own British story better by comparing it with that of North America. At almost every point, and especially on agriculture, banking, and labor questions, he contrasts developments and conditions on the two sides of the Atlantic, and finds valid reasons for the differences. But the task of writing a book which will fit the needs of students outside and inside England is too difficult for even the most skilled author. English students may benefit from comparatively long and detailed accounts of the development of the docks of London, Liverpool, and Southampton, the rise of a machine-making firm, and the story of the poor law; they may understand casual allusions and grasp the point of a geographical or other reference. But to outsiders these things are just so much Greek, they are unimportant and confusing, and may even prevent the gaining of any broad views of events or countryside.

The book opens with a penetrating essay on Adam Smith; then follow four parts of about equal length: The first is on fiscal policy and finance, including banking. The tale of tariff policy is well told, but I still wonder why it should come so early in the book. Part II deals with transport and trade, Part III with agriculture and industry. In both, new facts—technological, personal, and economic—add to our knowledge and understanding of an oft-told story. I doubt if any other writer has given such a fresh account of the development of industrial technique or shown so clearly the significance of each step. Part IV is headed "Life and Labour," and deals with the reactions of industrialism, the ebb and flow of economic and social ideals, the organization of labor, the rise of the friendly societies, and the co-operative movement. That Mr. Fay should devote more space to co-operation than to any other topic is the measure of his appreciation of the part played by the "co-op" in British life; and few who know the movement will question his judgment.

The first half of the period covered by this book has been damned by the Hammonds and many others as one of unbridled selfishness, and almost every textbook sizzles in its denunciations of the "evils" of the Industrial Revolution. Professors Clapham and Knowles and some others have entered a protest against this jaundiced view, have minimized the social horrors, stressed the economic gain, and suggested that the early factory-owner was not quite a villain and far from being the chief villain of the piece. Mr. Fay occupies a middle position; he will not allow the Napoleonic War and its aftermath to be blamed for all that was black, and finds that those in positions of power did much that was inhuman and unnecessary, sinning against a light that was quite bright enough for them to see if they had not refused to look. He can be ironic, even angry at the acceptance of social woe as the inevitable obverse of economic wealth. Now that he is back in Cambridge, it must be great fun to study economic history under Clapham and Fay.

HERBERT HEATON

University of Minnesota

The Condition of the Working Class in Britain. By ALLEN HUTT. New York: International Publishers, 1933. Pp. xvii+272. $2.00.

Although this work is frankly designed as Communist propaganda it nevertheless deserves serious consideration as a carefully documented account of conditions prevailing among the working classes of Great Britain in the largest centers of industry during the past two or three

years, especially in 1932. There is a minimum of denunciatory language; the author for the most part depends upon the facts presented to condemn the existing order. The conclusions he draws as to the inner and essential contradictions of capitalism are presented with considerable restraint and forcefulness. The work is intended as a parallel to Engels' *Condition of the Working Class in England in 1844* and to show that with the present crisis of capitalism conditions are reverting all too often to those of a century ago.

A brief survey is made of the organization, financing, and policy of the main industries in selected regions—South Wales, Lancashire, Clydeside, and London. There follows for each district a description of labor conditions such as wages, housing, health, unemployment, and the operation of the provisions for insurance and relief, especially under the Nationalist government with its Means Test and Anomalies Act, and the effects of rationalization in the way of the closing down of plants, intensification of labor, and reduction of earnings. The chaotic conditions due to the absence or failure of rationalization are exemplified in the Lancashire cotton industry. Other chapters deal with the growing proportion of female and juvenile labor to that of men, the agricultural laborers, the black-coated workers, and the attitude of mind of both middle and working classes toward the problems of present-day capitalism.

The economy program of the National government, especially as foreshadowed in the Ray Report on Local Expenditure and the Gregory Report on Unemployment Insurance, is denounced as putting the clock back a century in its attack on the social services. The *New Statesman and Nation* is quoted as follows:

> If this [Ray] Commission .... is allowed to have its way .... our local institutions will revert, if not in status, at any rate to the state of mind, of a century ago. There is much in the Ray Report, as well as in the phrases of the Royal Commission on Unemployment Insurance irresistibly to remind the reader of the mentality of the famous Poor Law reforms of 1834.

"Reformist" labor leaders, equally with the capitalists, are regarded as obstructions to genuine amelioration. Their proposed public corporations would, it is asserted, even strengthen the property relations of capitalism and develop them into a further stage of parasitism by "turning the capitalist class without exception into bondholders and rentiers."

The picture revealed in this book is extremely depressing, but it is drawn from authoritative sources, chief among which are the reports

of the medical officers of health. If it be objected that the year 1932 is unfairly chosen for emphasis, as having perhaps witnessed the lowest point of the depression, it can be answered that in the matter of housing at least the conditions described are not merely those of the moment. Harry Porritt in his Introduction pronounces this book "an indictment even more damning than that which Engels penned in 1844," because a century of technical development and scientific advance has intervened. Though the capitalists and their allies, the leaders of the Labor Party, are attempting, he declares, to show that in spite of temporary conditions the working class on the whole is better off than ever before, yet "the stark reality is that in 1933, for the mass of the people, Britain is a hungry Britain, badly fed, clothed and housed." Mr. Hutt's survey upholds this verdict at least for a great part of the population.

FRANCES E. GILLESPIE

University of Chicago

The Price of Transportation Service. A Theory of American Railroad Rates. By WINTHROP M. DANIELS. New York: Harper & Bros., 1932. Pp. vi+86. $0.75.

This little book, forming a part of a larger work on railroad transportation to be published at a later date, presents a theory of railroad rates.

Pointing out that the study of prices—including prices charged for transportation services—involves an analysis of the conditions of demand and supply, the author discusses the demand for railroad services and the cost of supplying them. On the demand side he approves the principle of "charging what the traffic will bear," a principle that in actual operation has "worked astonishingly well in both the public and the carrier interest." The wise freight-traffic manager, he says, will refuse to make reductions in the current high class-rates on such articles as silk, silver-plated ware, and burial caskets; for reduced rates will have little or no effect in increasing their tonnage. On thousands of other commodities, however, there is little demand for railroad transportation service at high rates of charge, and when this is the case the rates must be adjusted correspondingly.

On the cost side, the author accepts the joint cost theory of rates. He concedes that a distinction may be drawn between joint products

and alternative products; that whereas a slaughtered steer must yield both beef and hides, a railroad may handle either freight or passenger traffic, or varying proportions of both. None the less he believes that the distinction is one of formal logic rather than of practical use. The significance of the proposition that the railroad industry is one of joint cost is that it establishes the fact that the expense of performing a specific service of railroad transportation cannot be ascertained; "so great a part of the total expense incurred by railroad companies is incurred for apparatus or for services which perforce avail for a multitude of transportation services that the ordinary calculation of actual unit costs is simply not usable."

Though the actual cost of transportation for a specific shipment cannot be ascertained, the additional cost (out-of-pocket cost) can be estimated, and this additional cost (commonly considered to be approximately one-half of the average cost per ton mile) fixes the lower level of the rate. The author, though he accepts the generally held doctrine that a railroad can afford to take traffic at a rate that more than covers the out-of-pocket cost (providing this is all that it can obtain), emphasizes the necessity of distinguishing short-run and long-run conditions. To quote, "every additional ton of traffic that has been annexed, even though its revenue covered the immediate additional expense its carriage entailed, has hastened the inevitable day when increased capital investment becomes necessary and, with increased investment, increased expense of current maintenance." In our opinion, the point that the author makes so emphatically deserves greater recognition by the framers of railroad and public utility rates. A policy that adds somewhat to net revenues for a time may prove distinctly embarrassing in the long run, especially since determined resistance is likely to be made to any attempt upon the part of the railroad to raise rates that once provided a margin above out-of-pocket cost, but that subsequently, because of the growth in the volume of traffic, fail to do so.

In conclusion, the author believes that as time passes cost considerations will play an increasingly greater part in rate fixation. The whole trend of regulation is toward the establishment of rates based upon statistical cost computations. Moreover, the railroads in defending their tariffs or justifying proposed changes are practically compelled to resort to cost studies to support their position. For these, and other reasons, it is probable that "the mere ability of the patron to pay is

likely to be more extensively qualified as the active principle of rate-making, and the cost to the carrier to afford service to take on growing importance."

ELIOT JONES

Stanford University

Insecurity: A Challenge to America. By ABRAHAM EPSTEIN. Introduction by FRANCES PERKINS New York: Harrison Smith & Robert Haas, Inc., 1933. Pp. xv+680. $4.00.

With uncertainty of next year's, or even this year's, income facing every member of our industrial society today, interest in the hazards of unemployment, sickness, accident, death, and old age is by no means purely academic. Abraham Epstein, in furnishing us with a study of social insurance in the United States and abroad, has therefore rendered a valuable and timely service. The material is amazingly comprehensive, the style lively, and the author's interest sincere and sympathetic. It is refreshing to find a book on this subject which makes no dull pretense at being "non-partisan." We have had a plethora of fact-finding in the field of social insurance but relatively little interpretation. Mr. Epstein has boldly launched a book which makes no apology for presenting not only facts but a point of view. He scorns "heavy, lifeless tomes" in which "a spurious impartiality was built up, and every discussion began with 'on the one hand' and ended with 'on the other hand.' "

As the author has pointed out, no comprehensive discussion of social insurance in all countries has appeared since the publication of Dr. I. M. Rubinow's brilliant contribution in 1916. The New Deal was not sufficiently under way when Mr. Epstein published his study to be given consideration, and it is taken for granted by him that the profit motive and unrestricted competition will continue for at least a considerable period, in that a revolution of our social order is distant." But times are moving so fast that we wonder whether Mr. Epstein would now say of social insurance that "business men still shy from it as from the plague" and "industrial leaders refuse to study the question." The recent Wagner bill providing for a new federal tax on industry and permitting a diversion of this tax into state unemployment-insurance funds is precipitating discussion of unemployment insurance, at least among the most prejudiced. Moreover, the huge sums appropriated

for relief are making unemployment-insurance schemes seem relatively harmless. We are inclined to think that the "violent antagonism" (p. 62) which Mr. Epstein says characterizes the attitude toward social insurance in the United States as compared with other countries is rapidly vanishing in the face of driving forces set in action by the continuing need of caring for millions of unemployed and handicapped.

Until recently Mr. Epstein's special interest in the field of social insurance has been old-age pensions. He has fought long and valiantly for this cause and has to the credit of his unflagging perseverence real achievement. He regrets having to resort to straight money payments from the state to the aged because we have failed to build up reserves, but he is enough of a "gradualist" to be satisfied with this as a transitional step from the almshouse and charity procedure to a contributory pension scheme. In this branch of social insurance, as is the case in the other branches, the author has covered historically and with admirable selectivity of detail all countries, reserving analysis and theory for his treatment of the handling of problems relating to old age in the United States. Statistics are given to show the difficulties of finding a job after middle age when a worker is once displaced, and the close relation between low wages and old-age dependency is discussed.

The Committee on Costs of Medical Care is heavily drawn on for material on health insurance, but Mr. Epstein does not hesitate to berate this "conglomerate committee" for the "vacuities and contradictions of the majority report" which he attributes to its "apparent aim to please everybody" (p. 458). In the face of the Committee's sharp indictment of voluntary insurance, the author sees no excuse for not recommending a clean-cut compulsory insurance system. Objections to compulsory health insurance are vigorously and, in the opinion of this reviewer, adequately met (pp. 461–64).

Haphazard "remedies" for unemployment, such as sharing work and a return to handicraft and barter, are dismissed as "nostrums," and the author holds that "the idea of stimulating repairing and cleaning jobs would require for its effectiveness a wrecking crew to follow the repair crew, to be followed in turn by another repair crew." He considers the stabilization of the individual plant a cause of unemployment but holds that planned economy is "inconceivable in the United States in the near future," pointing out that the President's Research Committee on Social Trends regarded economic planning as "a social need rather than a social capacity" (p. 255). Maintaining that "the causes of unemployment are inherent in the very nature of our

social structure" and that the remedies proposed for the reduction or abolition of unemployment "either go contrary to social habits and natural forces which are insurmountable in practice, or, if feasible, can effect only slight improvements," the author proceeds to a consideration of ways of relieving the distress caused by unemployment. He attributes the adoption of the idea of unemployment reserves, supported by industry, to an abandonment of "realistic approach" and "losing heart" because the British scheme of tripartite contributory (government, employees, and workers) unemployment insurance has been "so ferociously attacked" in this country. He ridicules the idea of tying unemployment provisions to "the dim star of industrial stabilization" by providing for state funds supported by industry alone, with segregated plant or industry pools designed to furnish employers an inducement to regularize employment by rating their premiums according to their employment records. He regards other inducements to maintain steady production as more effective than this and claims that no substantial stabilization is possible under competitive production (p. 311).

Whether or not one agrees with all of Mr. Epstein's vigorous pros and cons, it must be conceded that he convinces the reader that insecurity is indeed a "challenge to America" and vigorously presents the complicated problems to be faced in considering ways of mitigating distress caused by the increasing insecurity of modern life.

MARY B. GILSON

University of Chicago

The Theory of Social Economy. By GUSTAV CASSEL. New revised edition translated from the fifth German edition by S. L. BARRON. New York: Harcourt Brace & Co., 1932. Pp. xiii+708. $5.00.

BOOKS I AND II

The first two books of this edition of Cassel's great work, as of the previous English edition, constitute the author's main synthesis of economic theory. The rest of the book, some 320 pages out of a total of nearly 700 of text, are devoted to money, trade cycles, and international trade. This work was substantially completed before the World War, the first German edition appearing in 1918. The first English edition (1924) was a translation of the second German edition (1921).

Since the treatment of general economic theory has been only slight-

ly changed in the course of years, and in view of the numerous reviews and discussions which have appeared, it is not here necessary to devote much space to Cassel's central theses. While his advance beyond Marshall may not be so great as he believes, it is a service to be freed of many of the vestigial concepts and terms of the classicists which still cling to the work of the Cambridge scholar. Cassel, as no one else, has brought to the ordinary student a satisfactory presentation of the basic concepts of the Lausanne school. Despite Edgeworth's dictum to the contrary, the reviewer feels that Cassel's emphasis upon the principle of scarcity is a real contribution in setting the basic economic problem, and that the same idea is not adequately expressed by the terms "supply" and "demand." Likewise, his elimination of the dualism involved in a peculiar treatment of rent deserves only commendation.

Probably the most discussed of Cassel's innovations is his attempt to abolish the concept of value, and to confine himself to a theory of price. He rejects the development of an economic theory apart from a theory of money, maintaining that if there is such a thing as value it must always be expressed and thought of as a price and that consequently to include the concept of value is simply to complicate the problem. Bibliographical references to extended discussion of this, as well as of others of Cassel's concepts and principles, particularly in German sources, may be found in Suranyi-Unger, *Economics in the Twentieth Century*.

Classical and neo-classical economic theorists have, by and large, thought they derived their principles from empirical observation. Marshall considered it the "business of economics to collect facts, to arrange and interpret them and to draw inferences from them" (*Principles* [8th ed.], p. 29). Cassel has in large measure succeeded in getting away from this position, in that he devotes himself largely to setting up the principles whereby wants may be as fully as possible satisfied with given scarce means. It is only rather parenthetically that he mentions the human institutions through which these principles do, or may, operate. The clear and precise statement of principles of economy, irrespective of social institutions, has reached a very high development in this work of Cassel, while the inadequacy of his remarks concerning social and political organization brings out the need for discussion of economic institutions in close connection with an understanding of the abstract principles which are here so admirably stated. The statement of principles here given is not beyond improvement, but such improvement can wait while more satisfactory work is done upon the nature of the institutions through which these principles may be applied.

Cassel stresses again and again, both explicitly and by implication, that a social system operates economically only in so far as it conforms to the "principle of cost," i.e., in so far as the price of a commodity or service does not diverge substantially from its cost. But having so carefully developed this principle and shown its importance, the author has no difficulty in proving to himself that the principle will, in practice, be approximately adhered to. One is almost tempted to accuse Cassel himself of adherence to a school of natural law. He sketches superficially the manner in which atomistic competition may be expected to achieve the application of the principle of cost (pp. 118–22). He then observes that over great portions of the economic field we find one or a few sellers supplying many buyers, or one or a few buyers taking the product from many sellers, or one or a few sellers dealing with one or a few buyers. Here the traditional method for achieving an application of the "law of cost" breaks down and Cassel neither offers us a satisfactory substitute nor expresses concern about the matter. We are tempted to accuse Cassel of uncritical belief in an "invisible hand." He does mention that "public authorities" may issue "regulations" (p. 125), and that buyers may "deal collectively" with sellers, or they may "conclude contracts over long periods." But he notes (p. 127) that "electric light undertakings are in constant competition with undertakings for the supply of light by other means, such as oil and gas. This competition compels the particular industries concerned to keep prices as low as possible, and by this means the principle of cost is for the most part maintained." He contends (p. 128) that attempts on the part of labor organizations "to raise wages above the rate determined by the principle of scarcity are always resisted and are regarded as excesses on the part of the labor movement." Apparently this "resistance" and "regard" are in general all that is necessary to adjust everything perfectly according to economic principles.

When Professor Cassel turns to the application of economic principles in "the socialist state," he does so not because he has expressed any doubt about the possibility of their application in a society of private ownership and entrepreneurship in the absence of atomistic competition, but simply in order to show that *if* a socialist state should be set up, then the same economic principles would or should or could apply. In this socialist state in which economic principles would apply, production will be directed solely by some ultimate state authority "appointed for the purpose" and "there is still freedom of occupation and of consumption." "Our socialist economy must thus essentially be based on the free exchange of personal services and means of satisfying

personal wants." No question is raised as to the probability that such freedom would be consistent with a political organization capable of exercising such power.

So, while Professor Cassel recognizes that atomistic competition is not achieving the application of the law of cost in the twentieth century, he has faith that it is being and/or can be applied by other methods. The reviewer would suggest that the twenty years which have elapsed since Professor Cassel wrote these pages have amply demonstrated that the overwhelming problem of economic life has to do with the type of social organization, if any, that is capable of achieving a reasonable degree at once of liberty and efficiency through application of correct economic principles.

HOMER JONES

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BOOKS III, IV, AND V

At the risk of appearing to slight the many virtues of the monetary parts of the book, it is proposed to devote this review to two aspects of the treatment which tend to make it a somewhat dangerous text to give to any but the most advanced and alert students without careful guidance, namely, the series of easily acceptable monetary heresies in Book III, and the purchasing power parity doctrine stated in chapters xii and xx.

The first of the monetary heresies is embodied in a passage on bank deposits (p. 412): "Sometimes, a man who has saved money entrusts the investment of it to his bank. . . . . The bank has then to find an investment for this capital." The implication, which crops up elsewhere in Cassel's theory, is that saving creates bank deposits. The fallacy is a slippery one, and one frequently committed by textbook-writers; but it must be combated. Students of recent monetary theory will realize that if the saver accumulates bank deposits he does so at the expense of a decrease either of his own cash holdings or of the cash or bank balances of somebody else. In the normal case, when his accumulation is at the expense of somebody else's bank balance, the total deposits and lending power of the banking system are unaffected. It must be recognized that saving which takes the form of piling up bank balances, just like saving which takes the form of piling up cash, is a form of hoarding.

Allied to the heresy just discussed is a passage (pp. 440–41) which

can only be interpreted as an a priori demonstration of the impossibility of hoarding! The argument is:

> If a certain part of the income . . . . is invested in media of payment at the end of the period, and thus loses its purchasing power in respect of commodities, then, on the other hand, a corresponding purchasing power, which at the beginning of the period was tied up in media of payment, is now set free, and so the sales of goods are able to attain the same proportions as they would have done if no income during the period had served to acquire means of payment. . . . . In itself therefore, the investment of income in media of payment means no diminution of active purchasing power.

The fallacy, of course, lies in regarding the cash balances rather than the incomes as "active purchasing power": Cassel neglects the fact that the transfer of cash or bank balances to the hoarders will set forces at work which reduce the flow of money incomes and expenditures (i.e., which retard the velocity of circulation of the existing money and bank deposits).

The third in the chain of heresies, again intimately related to those already cited, is the assumption that velocity of circulation may be treated as stable. Thus we find (p. 451) that velocity is governed by "factors which, in the theory of money, have to be taken as given"; and these factors are listed in a way which implies they are not liable to important variations. It is interesting to notice that where variations in velocity are necessary for the explanation of the problem in hand, Cassel calls velocity "relative payment effectiveness" (p. 484).

In leaving this range of subjects it may also be pointed out that the usage of treating banking as a means of increasing the velocity of circulation of gold (applied in terms of "velocity" on pp. 454–55 and of "payment effectiveness" on pp. 484 ff.) is pedagogically awkward in connection with the teaching of the important doctrine of credit creation. Furthermore, the central position given to gold makes monetary theory seem more and more remote from reality as the importance of gold backing for currency and credit recedes; and this is most unfortunate.

Perhaps the most characteristic part of Professor Cassel's book is the doctrine of purchasing-power parity. This, like the banking and currency doctrines just discussed, is tempting; and in this case the temptation comes directly home to the teacher who no longer can be satisfied to take the gold standard as the normal case and wants something else to tie to. Without the gold standard we are reduced to the necessity of asserting, as Professor Cassel puts it, that "the rate of exchange be-

tween two countries was determined solely by the market situation—that is, by the demand for, and supply of, bills." The implication that such an analysis cannot bring in long-run factors is unfair; but it must be recognized that the position is uncomfortable for the teacher. It would be very pleasant to have some simpler formula, just as it would be very pleasant to be able to explain relative prices simply and solely in terms of cost of production. It is thus entirely too easy to leap to Cassel's judgment (p. 516) of the "complete inadequacy of this theory, which was quite unable to give any factors determining the normal level," and to accept his agreeably alliterative antidote of "purchasing power parity."

As has often been pointed out, the trouble with the purchasing-power-parity doctrine is that it seems to be interpretable only in two ways, one of which makes it one of the most contentless of economic truisms, while the other makes it false. If the doctrine of purchasing power parity is applied only to prices of "international goods," the difficulty is that the prices (after allowing for transport, tariffs, etc.) *must* be proportionate to the exchange rate; for after making these allowances *we have only one price*, which is expressed in two currencies. (Consider, e.g., these allowances in the case of cotton, which will eventually give us the price in sterling and in dollars, either f.o.b. New Orleans or c.i.f. Liverpool.) Thus any exchange rate whatsoever must satisfy the required condition of expressing the ratios of these prices. If the doctrine is applied to a "general price level," on the other hand, theory leads us to expect and experience shows that this gives only the order of magnitude of the exchange rate and not a precise proportionality.

A possible solution is suggested by Professor Cassel's statement (p. 658) that "the rate of exchange must be so fixed that advantages and disadvantages in respect to costs of production are so compensated that the balance of trade is brought into equilibrium." This is entirely unexceptionable, though somewhat vague; and it does point to a significant relation between price levels in different countries. If we envisage a level of money costs of production of international goods in each country, the exchange rates must express the ratios of these levels so long as international markets are impeded only by tariffs and transportation costs, or there will be a disequilibrium on the exchange market of precisely the type Professor Cassel refers to when he speaks of a "normal level" of rates. But for one thing this is subject to the same interpretation as a cost-of-production theory of relative prices—that the

relations of marginal costs will depend partly on the relative demand for different products. Furthermore, the influence of cost of production on relative prices may be thrown out of gear by any sort of rationing arrangement applied to one or both of the commodities compared; and analogous restrictions now exist in international trade. The fact that the money cost of producing something exported from this country to France is out of line need not exert any influence to change either exchange rates or money costs in either country if France sets a rigid import quota. It is largely due to restrictions of this type that the generally accepted disparity between money costs here and in the European "gold bloc" countries at the newly established exchange rates does not warrant the conclusion that these countries must shortly abandon the gold standard.

When we consider these aspects of the cost-of-production relation, it is plain that accurate explanations of foreign exchange must still come within the old-fashioned "supply and demand" framework of analysis, although the notion of purchasing-power parity, applied to money costs, will be very helpful in explaining the forces underlying the demand and supply of foreign currencies.

ALBERT G. HART

University of Chicago

Confessions of the Power Trust. By CARL D. THOMPSON. New York: E. P. Dutton & Co., 1932. Pp. xx+670. $5.00.

When the resolution providing for investigation of the gas and electric industry was introduced into the United States Senate in 1927, the "most formidable lobby ever brought together" sought to have the inquiry made by the Federal Trade Commission rather than by the Senate committee proposed in the original bill. The lobby won, ostensibly. But the "friendly" Commission, aroused by the dubious compliment, proceeded forthwith to dredge out with sustained skill and vigor the farthest and darkest reaches of utility finance and propaganda—with results startling even to the most calloused. The mire contained in the first thirty volumes of the record made before the Commission has been sluiced by Carl D. Thompson, and the sediment constitutes the material of his entertaining and in some respects valuable *Confessions of the Power Trust.* The tale he tells is raw and robust: the story of bold and grasping men, inflamed by dreams of empire and possessed by a greed that drove them to rob their associates as well as their

"legitimate" prey; of devious scheming and arrogant blundering; of pitifully loose regulation; and of almost unbelievable gullibility on the part of the American investing and rate-paying public.

Whatever its polemic qualities, this book is not noteworthy as a painstaking, analytical study of utility finance and propaganda. In his Foreword the author professes impartiality and lack of bias, but the reader will have no misconceptions on this score after the first chapter. The author's willingness to accept as a "spokesman" for the industry any executive or employee who has made a silly or "incriminating" statement; his indiscriminate, blanket use of the term "confession"; the selected character of the evidence he presents; and the nature of his running comments and conclusions together with his hit-and-run style all serve to warn the reader that he is in the presence of a prosecutor.

Considered as a brief for the prosecution, the first part of the book, concerned with holding-company methods and machinations, carries decidedly less conviction than the later portion, dealing with the now familiar story of utility efforts to establish large scale control of public opinion. Even this latter would be more persuasive if the author had devoted a few of the 380 pages to a constructive consideration of the very real problem of publicity which even the best and fairest of utility managements is forced to meet.

The effectiveness of Mr. Thompson's attack on holding-company finance and policies is somewhat lessened by the scattered nature of the firing. The reader is never certain whether the author is concerned for the welfare of consumers or of investors; whether he is inveighing against excessive utility rates and earnings or against maldistribution of those earnings; whether he is attacking monopoly per se in the utility field, or concentration of wealth, concentration of control, or "unethical" practices; and frequently, even, whether he is speaking of holding-company or operating-company conditions. The fact that all of these may constitute legitimate targets does not excuse the author's failure to call his shots. And the confusion is not lessened by the ever present drums of municipal ownership which beat incessantly, sometimes softly, sometimes loudly, in the background. Nor is it always clear that the activities which arouse the author's ire are peculiar to this industry or that they always constitute unmixed evils (e.g., "trading on the equity" and "plowing back earnings"). Too, the discussion of financial technique is weak—too sketchy for technically qualified readers and far too general for the layman.

Despite frequent promises and representations, the author never

satisfactorily establishes the causal connection between holding company "write-ups" and operating company rates. It is not obvious that, if regulation is effective, holding company overcapitalization will necessarily result in higher operating company rates; and if regulation is ineffective rates may well be extortionate even though holding companies are not present. The very definite and undeniable causal link between "write-ups" and rates which Bonbright and others have pointed out is not so apparent as Mr. Thompson seems to believe, and the present book fails completely to identify and trace it.

The book will be of service, however, despite its shortcomings. It makes available in readable form a mass of information of vital importance to students of our times; its sensational disclosures, backed by undisputed evidence, present an unanswerable indictment of a major section of American life in the 'twenties. If the book is not without bias it should be noted that the bias is not without justification. If it lacks something in analytical qualities, it may be remarked that its effect still is devastating. The object of its attack is weak—wide open and impotent, a perfect pushover. And this book certainly pushes!

BEN W. LEWIS

Oberlin College

Det ekonomiska läget, 1928–1932. By JOHAN AKERMAN. Stockholm: Sveriges Industriförbund, 1932. Pp. viii+1159.

In line with the general publications on business fluctuations there has appeared in Sweden a periodical dealing with the economic situation of the leading countries and of Sweden. It is called *Det ekonomiska läget* and is the organ of the Industrial League of Sweden. A distinguished economist, Johan Åkerman, is the editor and has written most of the articles. The periodical has appeared as a bi-monthly from 1928 until the end of 1932 when the editor was called to a professorship in the University of Lund. At that time all the issues were assembled in one large volume and published with a table of contents, index, and numerous appendixes, graphs, and statistical tables. It is an elaborate work and deals fully with the eventful years that followed the Great War. The earlier numbers are limited to the prescribed order which the author adopted, but as he becomes more familiar with the work he adds many special articles on important subjects.

For the years 1928–30 each number discusses the following topics:

(1) The international money market. (2) The international aspects of the economic situation in the United States, England, France, Germany, etc. (3) The industrial situation in Sweden. (4) A brief discussion of the probable effect of these developements upon economic activities during the coming months.

The treatment of these topics is varied somewhat in the last two years although the general policy remains unchanged. During the year 1931 the editor considers: (1) International economic questions. (2) Economic problems in the leading industrial nations. (3) Economic problems in Sweden. The final year, 1932, contains discussions on: (1) Economic crises. (2) The collapse of Kreuger and Toll, various phases of the depression and the American crises of 1893–96 and 1929–32. (3) The rise in prices. (4) The thirteen years peace crisis. (5) How production begins. (6) Theories on the crises. As in the first three years, each number contains a summary of the situation and a forecast of the future trend.

This enumeration gives some idea of the scope and exhaustiveness of the work. It would require far more space to adequately review this large volume. In reading this work, however, one is impressed with the fact that in some respects one who surveys the economic activities of a country the size of Sweden possesses advantages which do not accrue to those in a large country. The institutions are plain and simple in a small country and therefore more easily understood, while they are complex and involved in a large country and therefore more difficult for the ordinary observer to grasp. This to some extent, perhaps, explains the remarkable clearsightedness that this author displays.

After the crisis in Sweden Åkerman advised: (1) To balance the budget. (2) To accumulate savings for a new upward movement. In this manner confidence is created; confidence returns when people feel they are standing upon a sound foundation. He stresses five points which he holds must be contantly observed if we are to increase savings (pp. 736 ff): (1) Economy both for the individual and the government, and this is necessary since in periods of prosperity there is a tendency to live beyond our means. (2) Lower wages, since they stimulate enterprise. (3) Sound finances. The government should do all in its power to reduce expenses and thus aid in the production of capital. (4) Tax luxuries since they increase revenues and do not reduce exports. (5) Cultivate the home market since it is most important in periods when everyone is extending every effort to save. It is the accumulated savings that restore confidence and start the wheels of in-

dustry according to this writer. If all will accumulate some savings the total sum is bound to raise the nation to its feet again.

The last number, December 1932, offers the editor an opportunity to give utterance to views on economic theory and history which he has long considered. Here he classifies business cycle theories as (1) real, (2) monetary and (3) synthetic, a combination of the real and monetary. Åkerman follows the synthetic with variations of his own (p. 981).

Surveying the events of the past ten years he finds that the crisis of 1929 was caused by two sets of forces, one economic and the other political; the one is normal and the other accelerating. The economic forces were affected by an intensive capitalization (p. 975) which was made possible through three types of savings: (1) free savings, (2) apparent savings by banks and speculation, and (3) forced savings by taxation. The intensifying factors were: (1) the war debt crisis, (2) the farm crisis, and (3) the inability of England to adjust herself after the war (the English crisis). The accelerating forces which both aided in bringing about the crisis and prolonged the depression became effective because the creditor nations, France and the United States, wished to retain their advantages. France desired guaranties before giving up reparations and the United States wanted either disarmament and/or payment.

PAUL R. FOSSUM

Carleton College

Die Staatseinnahmen. By HERBERT SULTAN. Tübingen: J. C. B. Mohr (Paul Siebeck), 1932. Pp. vii+200. RM. 12.

Art und Mass der Prognose der Steuerwirkungen. By HERBERT SULTAN. Tübingen: J. C. B. Mohr (Paul Siebeck), 1931. Pp. 27. RM. 1.80.

The second of these treatises, an inaugural lecture, is an expansion of one section of the first. Together they profess to set forth a dynamic theory of fiscal science which in turn is to form a part of a theory of political economy, not merely economics (*Wirtschaftslehre*). Sociological orientation is attempted by the inclusion of political elements, economic elements being subordinated to a position of second order. Realism is sought by the exclusion of the mental gymnastics of the marginal utility school, and by the limitation of material to what is observable (*anschaulich*). The state is exalted to a position of a controlling agency, no longer the Cinderella of classical economics. It, unlike economic agencies, can use political (compulsory) as well as eco-

nomic (voluntary exchange) means to effect its ends. Political (sovereign) power is exercised in setting aims and goals for society and in their realization, by carriers (*Träger*) such as the governmental staff and such private agencies as political parties and the press. Conflicting interests battle to a compromise in the public budget (in the broad sense of that word), determining the control plan of society.

There is nothing new in the arrangement of revenues in a series, with prices at one end and taxes at the other. It seems needless, a few Continental writers notwithstanding, to tilt at the concept of taxes as prices. The absence of a *quid pro quo*, and of anything resembling a sale in any tax payment, should decide the matter. Sultan's exposition of price as a uniting (*Ineinsfassung*) of two functions of money, *Zahlungsträger* and *Kaufmittel*, and of taxes as mere *Zahlungsträger*, seems labored and unnecessary.

Taxes are forced contributions, means to state ends, determined upon by the carriers of political power. Justice in taxation is relegated to the field of ethics. The author posits, as the proper test of taxes, their effects upon capital formation, restrictive or stimulating. But Sultan can only admit the complexity of the pertinent circumstances in explanation of his failure to demonstrate these effects. He makes short work of the shifting of taxes, for the same reason, disdaining to follow the Anglo-American practice of pursuing the tax on its journey through the market. Taxpayers (*Zensiten*) should know how much and when they are to pay; for taxes are costs, entering into price. Such entrance into price is assumed for all taxes although it is not shown how they enter beyond reference to a sort of catch-all, overhead costs. The assumption is interesting, since the author approves, grudgingly it seems, the customary theory of shifting, and accepts, as the determinant of shiftability, the elasticity of supply and demand.

Perhaps the treatises will be most provocative to American readers because of the underlying bias. There is, for example, a world of difference between the present treatment of shifting and that given the same subject in the winning essay in the sixth (1927) Allan T. Simonds Economic Contest, under the title, "Who Ultimately Pays the Taxes?" The difference condemns neither; either might learn from the other. The difference in bias appears most clearly in the section on *Die Einnahmen des Unternehmerstaates*. The essential function of the entrepreneur is no longer that of effecting new combinations, but that of leadership (*Zielsetzung*), which applies to both public and private enterprises. No reason is seen for the assumed superiority of the pri-

vate entrepreneur, when similar forms and equal magnitudes of ventures are considered. Extension of state enterprises may strengthen the position of the state both politically and economically. Here, again, the test is made the effect upon capital formation.

University of Kansas JENS P. JENSEN

Regulating an Industry: The Rhenisch-Westphalian Coal Syndicate, 1893–1929. By ARCHIBALD H. STOCKDER. New York: Columbia University Press, 1932. Pp. xii+159.

This book, which should have been a very valuable treatise at the present juncture, is a redraft, with some shift in emphasis and some expansion, of a doctoral dissertation. It is to be regretted that Professor Stockder did not see fit to bring this study above the level which typifies that type of product.

Not that the book is without virtue. The details surrounding the manipulation of production, quotas, marketing areas, and prices have been set forth with some care. The minutiae of the complicated machinery established at the several different stages has been delineated in summary—if unimaginative and unreadable—form.

Beyond this the study has little value for either "practical" or theoretical purposes. It does not give an adequate picture of the difficulties the Syndicate was established to overcome; the broad lines of policy or the general changes of policy; the extent of the confusion, duplications, and overlapping that prevailed throughout; the nature of the competition which was to be overcome; or of the weaknesses of the monopolistic system which the Syndicate was established to insure and maintain. In this sense it is comparable to those studies of the "laws of warfare" which include everything except the fact that during wars such laws are laid on the shelf: everything needed for interpretation and evaluation is omitted. The study gives practically none of the setting for the coal industry in the German economic system, nor even of the relation of the Syndicate to the coal industry in general. Contrary to the author's statement, the coal industry was never "socialized"; the use of this term misrepresents the facts. Some of the general conclusions drawn are so superficial as to be trifling.

There are many small flaws. For example, the *h* is omitted from the name "Thyssen," the *Reichskohlenrat* (post-war period) is mistakenly translated "*Imperial* Coal Council," and *Steinkohle* is rendered "*stone* coal." The title is misleading, there being no table going beyond 1926

and only two references including 1927. Many of the most important sources were not consulted, including the *Zeitschrift für Berg- Hutten- und Salinenwesen*, *Glückauf*, and the significant report on coal in the monumental "Enquete Ausschuss" series.

These things are all the more unfortunate inasmuch as Professor Stockder gives evidence in many places of having been able and in a position to push his investigations far enough to make possible the composition of a penetrating and useful piece of research on this highly important "experiment."

University of California ROBERT A. BRADY

Hours of Labor. By LAZARE TEPER. Baltimore: Johns Hopkins Press, 1932. Pp. 92. $1.00.

This monograph was the result of a study made in the economics seminar at Johns Hopkins University. It is divided into two parts. The first attempts to find a causal relation between certain economic forces and the hours of labor; the second to present the movement of hours in the United States from 1890 to 1928. In both the statistical method is used. The author points out that this method assumes that the "sample is homogeneous with the universe." His material, however, would seem to be adequate only for tentative conclusions. As such it offers a worth-while preliminary study of the field. His tables and charts in every case are clear and helpful.

In Part I Mr. Teper investigates the relation between hours of labor and each of the following factors: size of establishment, wages, and numbers of women and children in industry. For this he uses data obtained from Baltimore, Maryland, as typifying a "highly concentrated industrial center" and from North Carolina as representing a larger geographical area. "Within the bounds set by the samples," he found that hours had no apparent relationship to size of plant, that hourly rates of pay tended to vary inversely with the number of hours worked, and that men's hours tended to be greater than those of women and children in the same industry.

For the analysis of the movement of hours of labor in Part II, data collected by the United States Department of Labor Statistics for eleven selected industries from 1890 to 1928 are used. Since the bureau receives returns from both union and non-union establishments, the sample is representative. Considering the steady, hard-pressed demand of labor for shorter hours, and other favoring conditions, such as tre-

mendous increase in productivity, restrictive legislation, attitude of benevolent employers, etc., the fact that these figures show "a persistent downward movement" through this period is not surprising. Rather the slight results—an average decrease of approximately one-half per cent per annum—should be surprising to those believers in the efficacy of trade-union bargaining or the generosity of benevolent employers or both as adequate forces for reduction of hours.

MARION COTTER CAHILL

New York City

The Federal Trade Commission. An Experiment in the Control of Business. By THOMAS C. BLAISDELL, JR. New York: Columbia University Press, 1932. Pp. viii+323. $3.00.

This book, a valuable contribution, consists of two parts. Part I covers the administrative activities of the Commission and portrays fully (*a*) the attempts of Congress to define "unfair methods of competition" and to indicate the scope of the Commission's work; (*b*) the Commission's development of these ideas as they relate to "unfair competitive methods"; and (*c*) the manner in which the courts have limited these policies. Congressional intent included the legal concept of "unfair competition" as well as "any weapon" used in business and deemed by the Commission to be "unfair." Consequently the latter body embraced in its definition (*a*) the older ideas of the Common Law and in addition (*b*) various economic and social criteria of unfair competition. The "Older Criteria" included "misrepresentation of various kinds; trade-mark simulation; bogus independents; commercial bribery; lottery sales methods; disparagements; conspiracy to maintain trade channels, to fix prices, or to coerce; and harassing tactics of various types." The "New Criteria" added "resale price maintenance, guarantee against price decline, selling below cost, refusal to deal, tying contracts, exclusive dealing and price discrimination."

However, by limiting these criteria to standards previously found in the Common Law, and, furthermore, by assuming that the Act was directed primarily against competition tending to encourage monopoly, the Supreme Court was able to take over the chief task assigned to the Commission and to restrict its functions.

But suddenly the Commission came under political influence and its policies were changed, much to the satisfaction of "big business." It minimized publicity given to unfair practices between particular individuals and condemned only "where said practices tend to sup-

press competition affecting the public." Its more constructive work now lay in establishing trade conferences and drawing up rules to eliminate unfair competition in specific industries. There were: (1) Rules "affirmatively approved" by the Commission; (2) Rules accepted "as expressions of the trade"; (3) Rules definitely disapproved; (4) Rules on which judgment was held in abeyance. As yet the results of trade practice conferences are uncertain; a form of merchant law is being established, industries have the opportunity of becoming "self-regulating"; and the Commission is pleased with its work.

Part II discusses the Commission's fact-finding and publicity activities—the second method of establishing competitive control over industry. Efficient publicity was to clarify market conditions, concentration of industrial control, interlocking patents, vertical integration, trade association activities, and causes of price fluctuations. In answering the question "What has the Commission accomplished by use of its investigatory powers?" the author finds that in businesses engaged in distributing products and in trade association activities its success has been considerable. But in the coal, steel, and lumber industries its efforts were partially blocked by the courts. Trade associations frequently return to former price-fixing methods; hence industrial arrangements within which competition functions are of fundamental importance. The formation of monopolistic associations has not been checked, but it has been made clear that these are dominated by corporate combinations; that consent decrees are not very effective; that the Clayton Act can be easily circumvented; that the basis of monopoly is often legally valid; and that the consumer's interest is not protected.

With the skill of the true scholar, the author has analyzed objectively and impartially the economic, political, and legal forces which have wrought havoc with the policies of the Commission. He draws the conclusion that the chief causes for its failure lie in the narrow definition of "unfair competition" imposed by the courts; the control through political influence of the personnel and policies of the Commission; the lack of co-operation by the Department of Justice; the inability to determine whether competitive conditions existed in the majority of cases brought to trial; and the limitations placed upon its investigatory powers by the courts which have gone so far as to revive the ancient separation of manufacturing from interstate commerce set up in the E. C. Knight case.

C. J. FOREMAN

University of Cincinnati

Labor Economics and Labor Problems. By DALE YODER. New York: McGraw-Hill Book Co., Inc., 1933. Pp. x+630. $3.50.

Critics of higher education in the United States have condoned, when they have not condemned, our reliance upon text-book methods of instruction. It is a necessity particularly to be lamented in a subject so vivid in contemporary interest as labor problems. The considerable number of texts offered in this field within recent years may be interpreted, not so much as an indication of dissatisfaction with the specific books already on the market, but as a half-formulated criticism of the text-book method. But so long as the teacher of labor economics has his problem set in terms of large classes and limited library facilities, the omnibus text is, perhaps, an unavoidable evil, and each new publication will be eagerly examined to see if it is the long-awaited perfect book.

The volume by Professor Yoder, who is Associate Professor of Social Economics in the College of Commerce, State University of Iowa, differs from the more recent books in the field chiefly by its emphasis on the psychological and cultural factors which condition contemporary labor problems. This takes precedence over the historical approach which dominated many books of an earlier period. The presentation of the material, however, follows a descriptive and topical pattern. The author has conceived the labor problem in broad terms and has read widely both in the immediate and related subjects. He has performed a useful service in bringing together a large amount of up-to-date material from widely scattered sources. The bibliography of current references which may be culled from the footnotes will, doubtless, prove valuable to both students and teachers.

HELEN FISHER HOHMAN

Evanston, Illinois

The Anti-Slum Campaign. By SIR E. D. SIMON. New York: Longmans, Green & Co., 1933. Pp. viii+206. $1.20.

This little volume deserves the attention of economists as well as others interested in housing. It includes a crisp and adequate history of the various housing subsidies from 1919 to 1933, the first attempt at an economic analysis of the effect of housing subsidies on housing costs, an admirable section on housing administration, and an Appendix by Mrs. Hubback on differential renting. Those who are interested in the equitable distribution of subsidy benefits and the economic effect of

subsidies will not find a conclusive exposition of these aspects of public housing aid; such a volume is yet lacking. They will find the best preliminary effort at framing the question. Sir Ernest Simon, the author, is a former lord mayor of Manchester and once parliamentary secretary to the minister of health. The book, written from the Labor point of view, was the spearhead of last winter's attack on the Conservative housing policy, adopted in 1932, which withdrew all subsidies to local authorities, leaving housing for the first time since 1919 exclusively to private enterprise. The result has been a complete housing failure on the part of the government whose minister of health had reasoned that the subsidy might be withdrawn without stopping low-cost housing activity since the cost of housing had declined to a point equal to former costs minus subsidy.

F. A. GUTHEIM

Illinois Housing Association

Das Geld. By ERWIN HIRSCHFELD. Berlin: Carl Heymanns Verlag, 1933. Pp. vi+137. 4 RM.

Emanating from a Berlin lawyer, this book has for its purpose a compact presentation of monetary principles for the business practitioner. Actually it discusses at considerable length the "money idea," the relative merits of gold, paper, and bank money, the possibility of a "world-currency," etc. without acquainting the novice with such theoretical tools as an equation of exchange, the conception of a few definite major determinants of purchasing power, or with the notion of dominating lines of causation, secularly or within the cycle. The book passes as completely over such subjects as money-market differentia, the *modus operandi* of credit expansion, the constitution of foreign exchange rates and equilibria, as more elementary information—types of credit instruments, concrete banking procedures, the price and value of gold, and the like. Most of the book is devoted to a panageric of "constant-value money"; but the author contributes as little to the beginner's grasp of the intricacies of this theme as he does to the scientific solution of the problem.

HOWARD S. ELLIS

University of Michigan

The Theory of Profits. By PRAFULLA CHANDRA GHOSH. Calcutta: University of Calcutta, 1933. Pp. xx+442. 13*s.* 6*d.*

DR. Ghosh comes to the conclusion, after a lengthy discussion of the major theories of profit, that the profit share is an "indirect return." In his own words: "Profit is the indirect return that a property brings to its owner for the labour or capital employed by him in acquiring it exclusively, by production or by purchase of all the titles to it from all other claimants who may have co-operated in its production."

He points out that the source of this "indirect return" is the difference between "the actual market value of the property acquired [by business men] and the cost of purchasing all foreign claims to it." And this difference may arise because (a) the selling prices of a given commodity may differ in various markets (source of commercial profits); (b) the selling prices of a given commodity may differ owing either to changes in demand or to changes in monetary conditions (source of speculative profits); (c) the selling prices of various commodities formed out of the same materials may differ because of existing scales of "subjective preference or valuation" (source of agricultural, mining, and manufacturing profits); (d) the prices of commodities will differ because of artificial control (source of monopoly and illegitimate speculation profits); (e) the individual business firms' costs of production of a given commodity may differ because of variations in efficiency (source of ordinary or competition profits); and (f) the quantity sold of a given commodity by a business unit relative to its optimum size, may differ (source of ordinary profits).

It is evident at once that the analysis is difficult to follow. The same can be said for the section of the book dealing with the various profit theories. In many instances Dr. Ghosh either does not make himself clear or is not wholly correct in his interpretations.

Nevertheless, this book is worth reading. It indicates the bewildering variety of meanings given by economists to the concept profit. It shows, mainly by implication, that the profit-share cannot be considered adequately before one establishes a complete distribution theory. And, closely related to this point, it also indicates that profit as a distinctive income-share must be considered as an income-share related to all other income-shares taken together.

S. H. NERLOVE

UNIVERSITY OF CHICAGO

Capital and Interest. By MONTGOMERY D. ANDERSON. Chicago: Business Publications Company, 1934. Pp. vii+202. $2.50.

"*Capital* is the sum total of all goods *and services* [reviewer's italics] in existence at a given instant of time" (p. 127; similarly on p. 25, with "and services" in parentheses). "*Saving* means the performance of an act which will reduce the volume of consumption. Since consumption equals production, x, we may say that saving occurs when the derivative of x with respect to time is algebraically less than zero, or when $\frac{dx}{dt} < 0$" (p. 126). "A really good economist has got to figure out a place in the sun for himself and his fraternity!" (p. 22).

W. H. MOORE

University of Chicago

Economic Forecast and Reality, 1928–1932. By JOHAN ÅKERMAN. Stockholm: Nordiska Bokhandeln, 1933. Pp. 46 and graphs.

Quite subtly denying that neo-classical theory treats causality as a problem, Dr. Åkerman launches into a theory of capital goods disproportionality as the basic causal element in recurrent stagnation and prosperity of economic life. To sustain his position he interjects as cyclical causal elements the "technical fact, that the creation of means of production takes considerable time," and "the psychological fact that, ... it is beyond human powers to predict the course of events in detail." Upon this theory of overcapitalization (comparable to Spiethoff's), in which he distinguishes between saving as the significant factor and credit as a less significant factor in contributing to overproduction of capital, he presents his method of forecasting, which he developed as economist for the Swedish Federation of Industries. This method of forecasting involves, to interpret his meaning, a fitting of mathematical probability to phenomena of economic recurrences, a method in which he attempts, as he might say, to modify neoclassicism so as to bring in *time*, thus making it a "science of causality."

Åkerman takes the position that the economist who deals with forecasting should assume a well-defined stand as to his forecasts and should compare them with "reality." It is only in this way that theory can actually serve practice. Hence he presents and compares in summarized form, in the remaining half of the book, the forecasts he has made in *Det Ekonomiska Läget* (a review of business conditions published by the Federation), for the purpose of substantiating his position and the theory of cycles which he propounds.

ERNST W. SWANSON

University of Chicago

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5